



San Bernardino, California

REView

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Elementary Grades Task Force, *It's Elementary: Elementary Grades Task Force Report,* California Department of Education, Sacramento, CA, 1992, 104 pages.

This treatise comprises the vision for elementary education in California. It is intended as a road map of the school team of administrators, teachers, parents, and community members. This report is the culmination of many ideas in research, administration, curriculum, instruction, and assessment. Elementary education is entering an explosive time in terms of new ideas and practice. The recommendations found here will have limited impact if implemented singly. The total improvement of an elementary school program will be much greater when the school community endorses and adopts them in concert. Students must receive the full benefit of all that teachers know and that researchers have discovered about how to improve the elementary school experience.

The role of teachers is paramount in implementing the recommendations included in this report, for they are the ones who orchestrate learning in the classroom and connect each student to the curriculum. None of the important changes envisioned here will occur unless teachers, supported by site and district personnel, have the courage to undertake them.

The main assumptions of this report are, first, that children can learn effectively and, second, that elementary school is a key institution that begins this process of creating valuable individuals. The report details 32 *recommendations* that the Elementary Task Force suggests schools in California place into practice

instruction is the narrow focus on the acquisition of discrete academic skills to the exclusion of more thought-provoking content exploration, which taps the child's real-world experiences, feelings, and interests. The solution is creating a curriculum that addresses questions of values, feelings, meaning, and the relationship of self to others so as to take advantage of the natural curiosity and sense-making drive that motivates the child towards effort and performance. Skills are best acquired in the context of meaningful experiences that harness the child's inquisitive nature to the task at hand. Learning to think and learning subject matter are parts of the same gem of knowledge.

Recommendation

- Make a rich, meaning-centered, thinking curriculum the centerpiece of instruction for all students in all subject areas in the elementary grades.

The California Frameworks were re-cast in the 1980's to account for the current research on how children learn. These frameworks present the ideal subject matter for an elementary school. They call for a shift from a skills-based pedagogy in which the teacher's role is dispenser of knowledge to a thinking pedagogy in which the teacher's role is guiding a student-centered and experiential learning process. There are frameworks for Language Arts, Mathematics, History & Social Science, Science, Health Education & Physical Education, Second Languages, Visual & Performing Arts, and Character Education. These curriculum are the content of the vision of the future for elementary education in California, and they are now being implemented in California's schools.

The Thinking Curriculum

The most pervasive problem afflicting elementary

Reorganizing the Classroom

Many teachers feel overwhelmed by the changes

in the past few years. They can gain control over the changes in this transitional phase by following some of these recommendations.

Recommendations

- Begin curriculum reform by mastering a single subject area.
- Reduce the amount of time spent on skill-based activities.
- Choose depth over coverage in teaching a subject.
- Schedule class work in longer blocks of time.
- Team teach and specialize, especially in the upper elementary grades.
- Extend the learning day with homework assignments consistent with the thinking curriculum.

It is a wise strategy to choose a single subject area to specialize in the transition phases. Since the language arts and mathematics are central to the elementary curriculum, either one can provide a logical place to begin. Remember, the full transition is a long-term project. Only when a solid beachhead is established should the school develop new subject matter curriculum.

Move from skill-based drills to work on solving problems. This is a main tenet of the new curriculum. Moreover, choose depth over coverage. While it does take substantially more time for class lessons to be presented, these lessons are learned in far greater detail. Students will gain greater insight into the subject matter. In the same vein, classes should be scheduled to allow for greater periods of time in the thinking activity.

Teachers should specialize and teach what their training allows. This implies that teachers should also team teach some courses. While in grades K through 3 students may need the reassurance of a home room teacher throughout the day, in the upper elementary grades teachers can specialize and compartmentalize their time in subject areas.

Finally, assign homework that is consistent with the thinking curriculum. These assignments can prepare students for upcoming lessons, extend classroom learnings, and create new understandings. Homework assignments should pique students' curiosity, tap their inventiveness, and engage them in a variety of unpredictable learning adventures consistent with the thinking curriculum.

All children can learn, and, specifically, all can benefit from participating in a powerful thinking curriculum that energizes all segments of the student

population. The quality of the instructional program and expectations of the staff greatly influence the child's learning. The following recommendations identify instructional practices that help ensure the success of all students.

Recommendations

- Use a variety of grouping strategies.
- Provide more collaborative learning opportunities.
- Intervene early to prevent learning problems, especially in reading fluency.
- Develop an academic support network to ensure that all students acquire important learnings the first time around.
- Use categorical resources to support the thinking curriculum.
- Ensure that limited-English-proficient (LEP) students have access to the thinking curriculum.
- Avoid grade-level retention as an instructional strategy.

In the course of a given day, a student should move through a succession of work constellations designed by the teacher for the whole class, the individual, and small group settings. Whole class settings can effectively set the table for smaller groups, build consensus, and conduct summary discussions, for example. Small groups offer students the opportunity to take control of their own learning setting. They can be formed by personality type, learning activity, social pattern, common interest, random association, or the duration of a work project. An over-reliance on ability grouping leads to problems. Ability grouping leads to a culture of failure. These students behave in conformity with adult expectations. Moreover, low-achieving groups receive sub-standard curriculum. Finally, ability grouping tends to increase division among class ethnic, and racial lines.

Students from different academic levels often derive benefits from working together in small groups to reach common learning goals. Cooperative learning imitates how adults work, and, therefore, it promotes the development of social skills. Students benefit from cooperative leaning groups because they watch and learn from the way classmates attack new learning tasks.

Intervene early to prevent learning problems. The indispensable link in a prevention-oriented strategy of helping students before they acquire a self-image of academic failure is an aggressive program of literacy promotion. Reading is fundamental to ac-

demic learning. Early intervention programs, such as Reading Recovery, are expensive in the short run, but they are cost effective in the long run. They keep on working.

With 30 children, or more, in a typical elementary school class, how can schools make sure that the children who need extra help will get it? One way is by staggering the school day to allow some students to arrive before or leave after the others. Second, as more schools move to year-round scheduling, intercession classes for students in need of help are possible. Third, community resources could be used to aid the instructional program. Fourth, extra classes can be scheduled before and after school and on weekends. Finally, children can help one another.

Schools could use categorical funding to support the thinking curriculum. All of these programs have goals of increased student achievement. The key is to have categorical programs support the thinking curriculum. Place the resources in mainstream classrooms rather than in pull out programs. Moreover, use categorical funds for staff training activities. Generally, the notion is to have fewer categorical staff and more investment in school improvement.

Schools need to ensure that limited-English-proficient students have access to the thinking curriculum. When possible, teach classes in students' home language. When this is infeasible, modify the way English is taught in classrooms, group students to ensure that limited-English-proficient students have access to bilingual peers, make home language instruction materials available, or connect instruction to students' life experiences.

Finally, avoid grade-level retention as an instructional policy. Grade-level retention is not beneficial to the student. Students never catch up with peers, and they are always at greater risk of dropping out of school. An alternative to retention is mixed-age classrooms in the primary years.

Recommendation

- Invest shrewdly in technology to help promote the thinking curriculum.

One of the arguments that motivates the new vision of elementary education is that future workers must be proficient in all manner of technical machinery. More productive jobs will require that employees understand and use computers, "smart" machines, and advanced communications equipment. School districts that support the purchase of equipment and teachers who put high-tech devices to work deepening their students' conceptual understandings will find it easier to cultivate students who have both advanced technological skills and, more importantly, understand

how and why to use technology in everyday life.

Investing in Teachers

A fundamental goal of the thinking curriculum is to make the school a child-centered place where the student is consistently encouraged to play an active role in his or her learning. In order to accomplish this, the reform strategies must be teacher-centered. More than anyone else, elementary teachers determine what takes place in the classroom. Supporting the growth of teaching as a profession in California is the most direct route to improving the state's elementary schools.

While there is some good news concerning California's 130,000 elementary school teachers, most of it is unwelcomed. Teachers in the state are participating in the Mentor Program and the Subject Matter Programs, and more new teachers are from the top halves of their college graduating classes. There are, however, nagging factors that undermine teachers' sense of professionalism. Elementary teachers feel isolated. The average elementary class size in the state is 28.3 pupils, an increase of 2 students in the past five years. There is a significant shortage of instructional materials, and most teachers use their own funds to make up the difference. Despite the Mentor and Subject Matter Programs, there is an absence of a career ladder in teaching. Many teachers still find that the only way to continue earning salary increases is to abandon teaching and go into administration. Finally, elementary school teachers perceive that they lack autonomy. They feel they are treated like assembly line workers, but they are required to produce unique results with students. Decisions that directly affects what takes place in the classroom are made elsewhere.

Recommendations

- Provide teachers access to the best thinking about curriculum and instructional practices.
- Make sure that teachers have adequate scheduled time for working together in professional collaboration at the school site.
- Support teacher professionalism with a classroom supply budget, secretarial help, and a well-equipped workplace.

When using a thinking curriculum, teachers need more preparation time, more help from peers, and more subject matter knowledge. Few elementary teachers will have the opportunity to develop state-of-the-art expertise in all curriculum and instructional areas of interest. Individual teachers, however, can develop expert knowledge over the years and share

this knowledge with their colleagues. The Subject Matter Academies and the trainer of trainers model, using staff development activities, has already proved to be an effective way to improve curriculum and instruction. Some additional professional development activities are available. A common one that often goes untried is an area study team, which is a group sponsored by the district or school that meets to read, to discuss, and to evaluate new curriculum and instruction.

The thinking curriculum must be constructed daily by teachers, not the present decision makers in the district. Teachers must be committed to both the subject matter changes and to the work assignment changes. Without their complete buy-in to these changes, the reflected vision in the mirror will be a distorted failure. In order to secure the acceptance of teachers, this report calls for a fundamental alteration in teachers' working conditions. Teachers should have more time for professional development, including time for long-range planning, for taking stock, and for additional training.

Several policy choices are immediately available to the school district. Schools can take better advantage of the staff development days available to them under AB 777. They can earmark 25 percent of all categorical funds for a variety of professional development activities. They can accumulate small increments of instructional time by extending the school day, and use the surplus time in larger blocks of staff development time.

Schools need to support teacher professionalism with support resources. Teachers should be sustained in the work place with a quiet office space, a comfortable faculty commons, access to a telephone, word processor, computer, and copy machine, and on call secretarial help. Moreover, teachers should have a discretionary budget for purchasing classroom supplies and supplementary instructional materials.

Recommendations

- Aggressively recruit teachers from a diversity of ethnic backgrounds.
- Support new teachers.

In the first five years of this decade, California will need 37,500 elementary teachers, or 29 percent of the present population, and schools must aggressively recruit high quality teachers. The ethnic make-up of the present teachers is highly skewed toward non-Hispanic Whites, while the ethnic make-up of the present student population is substantially diverse. Less than 50 percent of the present enrollment is non-Hispanic White. All minorities are under-represented in the public school teaching ranks in terms of their share of the student population. The recruitment of

new teachers, especially from minority groups, must become a top priority in California.

Finally, schools should move from a mentality of "sink or swim" your first year of teaching to one of mentored support throughout the year. The California New Teacher Project has pioneered the assistance of new teachers by assigning mentors to them, by allowing release time for the teachers to observe experienced teachers, by offering seminars to troubleshoot recurring problems, and by providing new teachers a stipend for the purchase of instructional materials. This program shows new teacher return rates near 95 percent, rather than new teachers not in the program, who have return rates near 70 percent.

Measuring Outcomes

The problem with many assessment instruments used at the elementary school level is that they still reinforce the old skills-based curriculum. Managing the transition to a thinking curriculum will entail creating a new assessment system as well. Four principles have already begun to emerge. First, assessment will largely rely on exemplary tasks that give information about student performance. Second, the tasks assigned will be complex (involving the marshaling of many learning behaviors), open-ended (with many possible solutions), and intellectually coherent (resulting in a single work product). Third, the results of the assessment will be formative. They will provide a basis for making decisions about the student's future learning needs and not be used to sort and select students for segregated learning tasks. Finally, the assessment of the complex repertoire of learning behaviors called for by the thinking curriculum will be evaluated on the basis of agreed-on criteria while also relying on the informed professional judgement of teachers. Planned types of assessments include portfolios, on-demand testing (both in class testing and norm reference testing), and performance testing (completed over periods of days in some cases).

Recommendations

- Continue building a system of authentic, performance-based assessments that measures the full scope of the thinking curriculum.
- Define a set of performance standards for the elementary years.
- Assess limited-English-proficient students' subject matter performance in the home language.
- Do not assign letter grades in the primary years.

A rich variety of possibilities for performance testing are available. For example, in one pilot mathematics test teams of students are given an open-ended problem for which they must devise a solution. Teams work on the solution for 45 minutes, and then prepare an oral presentation for the class. After all groups have reported, the teacher leads a discussion on the good and bad points of each presentation. The next day, each team writes up its final solution, which is then available for scoring.

Students in Chapter 1 programs should benefit from the substitution of performance assessment for norm reference testing. The impact of decontextualized and narrowly focused testing has been particularly devastating for students in compensatory programs. Many of these students spend their entire school lives doing remedial exercises designed to focus on basic skills. They never have access to the education which they will need to pull themselves out of their economic and social environment.

The next step, now being taken with the California Assessment Program tests for fourth grade, is the definition of a set of performance standards for elementary school students. Moreover, since the ideal assessment tasks are performance ones, limited-English-proficient students should be assessed in their home language.

A final step should be to change grading procedures at the elementary level: letter grades should not be assigned during the primary years. Grades tend to label students and sort them into *de facto* learning tracks. Assessment practices that promote rank ordering and diminished self-esteem should be avoided. Performance assessment is a better method of providing information on the child's strengths and weaknesses to teachers, administrators, parents, and board members.

Creating a Learning Environment

Schools improve both when a core of teachers and parents begin to insist that they should improve and when these same groups act as a team to reinforce each other's efforts in delivering a quality education to all students at the school site. A commitment to excellence, that is, to working together purposefully, respectfully, and trustfully in the pursuit of an agreed-on educational vision, is characteristic of all successful schools. There are some important first steps.

Develop a unifying vision for the school. In successful elementary schools, the staff, teachers, parents, and community members have articulated a common vision of what the school is trying to accomplish. Gathering information from these groups and developing a vision for the school, however, is a formidable task. The most important thing to keep in mind is to keep the process open. The ongoing process of developing a unifying vision helps promote

a sense of belonging and community among all those who take part.

Use that vision as a guide for action. While the unifying activities of an ongoing school vision are important, the real power of a clearly stated vision comes when it is used to guide improvement efforts at the school. The report suggests that school change be acknowledged as a dynamic process, that is, one which must change to be meaningful. A dynamic plan needs to allow flexibility in meeting the needs for change at the school. It also needs to allow all members of the school community to join the change process at any time.

In successful schools, children feel a sense of belonging, and schools can promote a nurturing environment by various strategies. They can recognize students for their scholarly efforts in assemblies and recitals, on bulletin boards, and in newsletters. Schools can use the home language of limited-English-proficient students in official settings, such as school newsletters, announcements, and assemblies. Moreover, schools can give students a chance to give back to others as well as receive by collecting canned goods in food drives for needy groups, adopting senior citizens' centers, or beautifying a corner of the school grounds.

Recommendations

- Develop a unifying vision of what the school is trying to accomplish.
- Use the vision as a guide for action.
- Bond students to their school by making them feel part of a caring community.
- Reach out to parents to solicit their active involvement in the education of their children.
- Systematically upgrade school plans statewide.

Parent involvement is both one of the most valuable resources for school change and one of the most under-utilized. The most important variable in determining whether parents become involved in their children's education is the school program itself. When schools pursue a comprehensive program of involving parents in all facets of the educational endeavor, parents respond enthusiastically and their children benefit. Schools could help parents with their parenting skills. They could coordinate community support services on the behalf of parents. They could inform parents how best to assist their children in learning at home. Schools could promote a clear two-way communication regarding their child's progress. Schools could solicit parents' time to serve as informed

decision makers in governance, advisory, and school advocacy roles.

A final step in creating an environment conducive to learning is to create a school setting that is safe and welcoming with physical facilities that support the growth of all students. In schools that work, the physical environment is clean, pleasant, and well-maintained. Furniture and space are functional and adaptable to frequent re-grouping of students according to the particular demands of a given learning activity. The caring school community provides not only physical safety but also psychological safety. Students know that they are protected from random violence, which they may experience elsewhere. Children of all ethnic and cultural heritages need to be reassured that schools not only guarantee them a safe environment, one free from prejudice and harassment, but also that the school setting is an inclusive and welcoming one that celebrates the diversity of its members.

Coordinating Student Services

Schools should work with human service agencies to provide a wellness foundation for effective education. Schools can provide the continuity of contact over time that *ad hoc* interventions lack. In collaboration with other social service providers, the elementary schools can serve as a clearinghouse for providing help to children and their families.

Recommendation

- Coordinate human services at the school site to ensure that the basic security needs of children are being met.

Every school can take three steps to participate in the new collaborative social services effort. Each school can provide a setting. It can furnish a venue for a variety of services that can be provided by other governmental and private agencies. Each school can designate a coordinator. One individual at each school can be responsible for maintaining linkages with community service providers. Finally, each school can participate in the existing efforts. Two programs are now working toward this goal of collaboration: "Healthy Kids, Healthy California" and "Every Student Succeeds."

Reorganizing Institutions

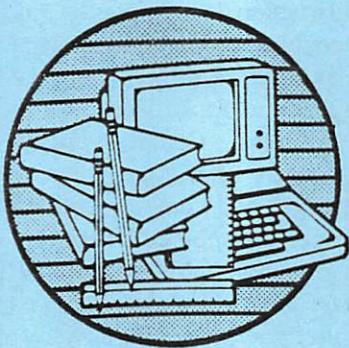
The general thrust of change for school districts, which is an integral part of the restructuring effort, is to tap the energy and creativity of the professional staff at the school site to achieve outstanding results. Instead of constantly monitoring for compliance using rules and regulations, the district staff's main roles are to enable and to facilitate, that is, to build up the capacity of people at the school site to reach agreed-upon educational goals.

Districts can take a few steps to support site-level implementation of the recommendations in this report. First, districts can issue the invitation. They can announce to all parties that the rules of the educational enterprise have changed and what transpires at the school will no longer be "business as usual." Second, the district can provide access to the knowledge. Providing guidance and assistance to teachers struggling to translate frameworks and model curriculum guides into the daily classroom reality is the central challenge facing the elementary school reform movement. Third, districts can make connections and run interference. Districts can lend strong institutional support to schools by making the district boardroom, not the school site, the arena for discussion and by ensuring that all interested parties have access to an established decision making process. Finally, districts can grant real authority to the school personnel.

Recommendations

- Enable the local school community to take the problem-solving initiative.
- Hold schools accountable for reaching agreed-on outcomes.

In a school district committed to on-going restructuring, schools are still expected to teach a rigorous thinking curriculum. Holding schools accountable means that administrators and board members must accept responsibility for a number of specific activities. First, they must build local support for statewide performance standards. They must explain these standards to the local community. Second, they must establish local criteria for success. Third, administrators and board members must make accountability results public. Finally, they must intervene in poor performing schools. The one alternative that is not acceptable is to do nothing in the face of persistent and chronic failure.



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Middle Grades Task Force, *Caught in the Middle: Educational Reform for Young Adolescents in California Public Schools*, California Department of Education, Superintendent of Public Instruction, Sacramento, CA, 1987, 160 pages.

The middle grades are unique. No other grade span encompasses such a wide range of intellectual, physical, psychological, and social development, and educators must be sensitive to the entire spectrum of these young people's capabilities.

Middle (sixth, seventh, and eighth) grade students must experience the meaning of high standards of academic excellence in a school setting which recognizes the importance of personal connectedness. While this personal connection is critical for students of all ages, it is of special significance for children in the middle grades because it is here that lifelong values begin to be shaped, including those that relate to academic achievement and personal commitment to educational goals. Moreover, for many young people, the middle grades represent the last chance to develop a sense of academic purpose and personal commitment to educational goals. Those who fail at the middle school level often drop out of school and may never again have the opportunity to develop to their fullest potential.

The theme of this report is the integration of two challenges with the development of young adolescents. The first challenge for schools is to make sure that students are connected to the goals and purposes of their school in positive ways. Students must have opportunities to develop positive self-esteem. Middle grade schools must provide students with a caring transition as they move from elementary school to

high school. The second challenge for schools is to prepare students for academic success in high school. The aspirations reflected in this report are for all students, whether they are enrolled in regular, special, bilingual, or compensatory education classes.

This report presents a reform agenda for the middle grades in California. This review is organized using the twenty-two principles of middle grade education, and a short discussion will follow each. The report is a compendium of research-based statements and recommendations on middle grade education. The report lists 101 recommendations which have implications for legislative initiatives, educational policies, administrative guidelines, and professional practices.

Curriculum & Instruction:

Core Curriculum: Every middle school student should pursue a common, comprehensive, and academically-oriented core curriculum irrespective of primary language or ethnic background.

A common core of knowledge exists which all educated citizens should possess. This core includes lessons to be gained from the study of literature, history, mathematics, and the arts. The content of core curriculum subjects must be linked to the heightened curiosity of young adolescents about themselves: who they are, how they fit into the world around them, how that world functions, and what exciting prospects for their lives lie beyond the immediate horizons of their present knowledge and experience. Unless this connection occurs in the middle grades, students risk trivial and superficial responses to the personal challenges they will encounter throughout their lives.

The core curriculum should be defined clearly. The California Department of Education reports *Model Curriculum: K-8* and *Model Curriculum Standards* for grades 9 through 12 begin to make this definition clear. In order to achieve the level of clarity required for the middle grade core curriculum, students in

grades six, seven, and eight should study a full and balanced repertoire of subjects, including Reading & Literature, Language Arts, Mathematics, Science, History & Geography, Visual & Performing Arts, Physical Education & Health, Advisory & Group Guidance, and elective & exploratory courses. The core curriculum is designed to provide students with a broad academic foundation needed for success in high school. It is also intended to extend their ability to exercise postsecondary options related to academic and employment opportunities.

Knowledge: Every middle grade student should be empowered with the knowledge derived from studying the ideas, experiences, and traditions found in the core, elective, and exploratory curricula.

Young adolescents have a natural curiosity about the world in which they live. They must have multiple exciting opportunities to explore this world through exposure to ideas, experiences, and traditions. Their study of history, geography, science, mathematics, and the arts should allow them to discover the contributions of famous individuals of varied ethnic and linguistic backgrounds who have given our society its rich cultural heritage.

Paralleling the core curriculum are two essential types of curricula which should be available in the middle grades. The first type, elective courses, encourages students to pursue individual interests. The second type is exploratory. It allows students to survey broad themes and topics of potential interest. There are many ways to make room for elective and exploratory curricula in the school program. These may include learning experiences scheduled within and outside the school day.

Elective and exploratory curricula are for all students in the middle grades. No student should be deprived of the intellectual stimulation found in pursuing areas of special interest or exploring new categories of information and knowledge. Neither basic skills mastery nor English language proficiency should be required as conditions for enrolling in elective or exploratory courses.

Thinking and Communication: Every middle grade student should develop the capacities for critical thought and effective communication.

Students in the middle grades experience a rapid unfolding of their intellectual capacities, especially the ability to think reflectively. This ability opens the way for more complex and abstract thought processes. These have profound implications for the development of moral reasoning, problem-solving, critical thinking, and the ability to use scientific methods and make aesthetic judgements. These capacities must be matched by curricula and instructional practices which demand both thought and

thoughtful communication in the classroom.

Young adolescents are excited by "thoughtful" classrooms. These are characterized by the use of stimulating instructional strategies. Students are called on to analyze and synthesize data, to pose questions, to explore, to experiment in explaining their reasoning, and to apply different strategies and solutions to problems. Course work assigned to students increasingly challenges them to use the methods of thought and communication which are intrinsic to the various subjects being studied.

There is a common misconception that higher order skills must mean advanced skills, i.e., the skills you get only after you master the lower order ones. This is *not* the case. All students think; all students can learn ways to think better. No matter how competent students may be, they must organize their ideas; they must organize their time; they must solve complex problems; and they must think critically. By emphasizing inquiry into ideas and concepts, young adolescents can directly engage their imaginations. Access to ideas and concepts that logically interpret the curriculum must be assured to all students, including those with basic skills deficiencies or limited-English proficiency.

Young adolescents have the growing ability to put together complex concepts and to apply skills across subject matter areas. The complexity involved in efforts to integrate multiple subject areas should be recognized. At a minimum, middle grade students should experience an integrated reading/literature/language arts core or a history/geography core. The core should be taught with a humanities emphasis by one or more teachers in an extended block of instructional time. Middle grade students require multiple opportunities to perceive conceptual relationships among core curriculum subjects. They need to experience the application of more complex thinking and communicating skills through direct involvement with interdisciplinary curriculums.

Character Development: Every middle grade student should be helped to personalize ideals and to develop the ability to make reasoned moral and ethical choices.

Commitment to hard work, to responsibility, and to the importance of education have been found to be more important to school success than a student's socioeconomic background. Such findings argue strongly for the importance of character development as a vital goal of a strong middle grade education program. Conceptually, this goal is hard to define and elusive in terms of attainment because of the inherent sensitivity of moral and ethical issues. Students need to confront moral and ethical issues under the guidance of sensitive principals, teachers, and counselors. Two primary goals must be: to help students develop their intellectual capacities through

reasoned thought and to use this ability in arriving at personal decisions about issues which have moral and ethical consequences.

The study of literature and history, provide a rich array of possibilities for students as they examine the personal commitments of others to the ideals of hard work, responsibility, and self-improvement. Instructional materials used in the middle grades should include biographies, autobiographies, and other types of resources which reflect the experiences of individuals of widely varying social backgrounds and ethnic origins who have contributed to our national ideals.

Teachers and counselors should remain involved as students struggle with their own value commitments. This conviction is strengthened by evidence which suggests that students experience the basic development of their adult values during the middle grade years. Character development should be shared by school personnel with the home and other significant institutions and individuals in each student's life.

Learning to Learn: Every middle grade student should develop a repertoire of learning strategies and study skills which emphasizes reflective thought and systematic progression toward the goal of independent learning.

Instruction in how to learn is needed in each subject of the core and exploratory curricula. Strategies for approaching and completing assignments are especially critical. These are essential to all future learning and must be emphasized in the middle grades if students are to be successful learners in high school. When major assignments are given, teachers should help the students identify what skills are needed to complete the varied tasks involved. Mastery of new skills, including higher order thinking and communicating skills, should become direct objectives of instruction as students prepare to undertake basic assignments.

Middle grade students should understand how learning brings about changes in their lives, particularly through those experiences which come from an expanded perception of themselves and their world. This perception empowers students to do creative things, to engage in higher levels of learning, and to explore new categories of knowledge. With this added perspective, and the power which it conveys, students can learn to apply themselves increasingly to personal academic goals with long range meaning for their lives. Students can also be encouraged to approach learning with a direct sense of its more immediate significance.

✓ **A sequence of steps to help students become more independent learners is:**

- Look for new information in readings, presentations, and discussions.

- Look for clues which help to explain the relevance of what is already understood and surround the new with the background of the familiar.
- Experiment with what is already known, search for connections, and relate previously unrelated information.
- Note or create patterns and relationships which identify ways of breaking down complex ideas and concepts into manageable components.
- Develop models and use other strategies to represent patterns and relationships among parts and wholes which bridge the gap between existing and new information.
- Play with the new information, explore new combinations of data, develop an awareness of the power of concepts and generalizations which unify previously independent facts.
- Reflect on the ways in which new levels of understanding change perceptions, attitudes, and values.

Middle grade students need a strong combination of learning strategies and basic study skills as a necessary foundation for the more demanding and less personalized instructional environment of high school. School practices should include cooperative learning, peer help programs, and sound homework policies. These represent some of the most important classroom priorities as young adults are helped to move toward the goal of independent learning.

Instructional Practice: Instructional practice should emphasize active learning strategies which are consistent with the goals of the core curriculum and the developmental characteristics of young adolescents.

Instructional practices in the middle grades should join young adolescents to the core, elective, and exploratory curricula. Instructional practices must be appropriate to both the structure and substance of varied subjects and to the developmental characteristics of students. The curricula stress the importance of systematically empowering students to do for themselves whatever each subject requires, encouraging them to move toward the ideal of independent learning. Active learning instructional strategies become very important. Active learning involves students intellectually and physically in varied learning tasks. It occurs with differing levels of direction, guidance, and feedback from teachers.

Students learn by exploring multiple sources of written information, including library references, collateral texts, original documents, or similar resources. Their ability to do more abstract thinking gives them the capacity to use research skills to find answers available to them through their own efforts. Young

adolescents are seeking answers to life's ultimate questions. Their search is paralleled by the central themes of literature, history, the arts, and other disciplines. These themes must be emphasized in the core curriculum for the middle grades.

Questioning techniques encourage and provoke students to think, to organize their thoughts, and to reach conclusions based on reason and evidence. Teachers should ask questions which have a range of appropriate answers, all of which require some explanation of the student's thinking. They should wait five or ten seconds for all students to think. Then, the teachers should call on students without anyone raising hands. Three things are accomplished with this strategy. All students know they are expected to think. They are given time and silence to think. Finally, all students must be ready to communicate their thoughts.

The allocation of instructional time should be such that the more complex learning outcomes receive proper attention. Teachers should clearly state learning outcomes, which involve a balance between more limited and more complex cognitive skills. They should present a sequence of well-organized learning activities that are specifically related to these outcomes. They should employ clear and precise explanations to teach skills. They should ask questions frequently to see if assignments are understood and if learning outcomes have been attained. Finally, teachers should provide multiple opportunities for students to practice basic skills and to apply and extend them to new situations.

Individual or joint student projects should be major features of each unit of study in core curriculum areas. These projects help students with learning experiences which allow them to draw on the most important ideas, concepts, and skills gained from their studies. These projects should reflect what a culturally literate adult is able to do in our society so that students become prepared to assume that role.

Teachers must increasingly share instructional management responsibilities with students during the middle grades. This is essential if students are to be allowed to learn to take part in active learning strategies. Necessary skills include cooperative learning techniques, group discussion strategies, time management skills, problem solving methods, and simple project management practices.

All middle grade students should be intellectually challenged through the use of multiple instructional strategies. Classrooms cannot be divided between the academic "haves" and "have-nots." Strategies must be exciting, pertinent, integrated, and diverse. There is a special urgency about this need because the middle grades represent the turning point with respect to their lifelong academic interest and commitment.

Student Potential:

Academic Counseling: Every middle grade student should have timely information about the relationship between the curricula of the middle and secondary grades and should be provided access to the opportunity to prepare for the broadest possible range of academic options in high school.

The logic, future options, and choices of the curriculum must be made clear. Students must also be helped to grasp the significance of subject areas selected from the core curriculum. The requirements of a strong academic counseling program include timely access by students to trusted adults who have a comprehensive grasp of the logic of the core curriculum, a broad knowledge of the academic program, and a thorough understanding of the connections between middle grade courses and high school curricula. While such a program provides for direct and substantial parental involvement, teachers and counselors have the most vital role to play in making certain that students gain the benefits of the counseling program.

Equal Access: Every middle grade student should have access to the most advanced levels of curricula offered during each of the middle grades. This opportunity should be facilitated through educational policies and practices which make the highest level of content mastery a valid and obtainable goal for vastly increased numbers of students.

The principle of equal access dictates that all students must be provided the opportunity to master the most advanced curricula offered during each of the middle grades. Students do have different strengths. Individuals will invariably master the same skill or topic with different levels of sophistication and detail. Some will require valid, specific, and often temporary instructional help that may be impossible to provide adequately within heterogeneously grouped classes. When this need occurs, instructional support services, provided through categorical programs, should be integrated within the school schedule in such a way that affected students still spend a maximum amount of time in their regular core curriculum classes.

Heterogenous grouping practices should be the norm in middle grade classrooms.

The urgency attached to the goal of equal access provides strong motivation to educators to introduce more individualized instructional practices in heterogeneous grouped classes. Curricula can be organized to emphasize units of study designed around content goals common to student assignments rather than around other learning outcomes which distinguish students from one another.

Student Diversity: Every under-represented minority middle grade student should receive encouragement and incentives to pursue academic and occupational goals.

Middle grade students must be challenged to achieve cultural, scientific, and mathematical literacy through core curriculum studies. These studies have the potential to unlock unlimited futures for students, regardless of ethnic and linguistic differences, handicapping conditions, gender, or socioeconomic variables. Businesses, industries, the professions, and colleges and universities must help in this task.

One of the most critical issues posed by a culturally diverse student population is the manner in which attention is paid to individuals. Differentiation of the core curriculum on the basis of ethnic, linguistic, or other educational superficial criteria is fundamentally wrong. Practices which keep Afro-Americans, Hispanics, and other ethnic minorities outside the strong academic mainstream of the middle grades thwart their academic growth and severely limit their access to secondary and postsecondary education. It is urgent that English be taught more efficiently and effectively to California's large and growing population of limited-English proficient students. These youths are too often relegated to a barren curriculum of remedial skills that does not prepare them for high school course work in literature, science, history, or mathematics.

The need for public school teachers drawn from the ranks of under-represented minorities is especially acute. Our schools must be staffed by teachers who reflect the diversity of the state's racial and cultural heritage. This means that we must do a dramatically better job of ensuring that under-represented minority students in the middle grades are prepared academically for high school and subsequent entry into institutions of higher learning. A vastly increased pool of candidates must become available to consider teaching as well as other professions which require higher education as a prerequisite for entry.

At-Risk Students: Many middle grade students are "at risk" of dropping out of school. They should have access to educational programs which emphasize personal commitments to academic achievement.

Early adolescence represents the most critical period in the education of students. Although at risk, most of the identifiable potential dropouts are still in school during the middle grades. There is still hope for them. In practical terms, large numbers of middle grade students are also at risk. Early adolescence is a volatile time. Intense physical, psychological, social, and intellectual changes mean that few students escape unscathed.

Organizational and instructional priorities of sound middle grade educational programs have particular meaning for at risk students. Provision of extended

blocks of instructional time for selected core curriculum subjects has the potential to allow every student to be known personally by one or more teachers. Other strategies include cooperative learning groups, the use of tutors and mentors, and working on assignments that are personally relevant to the student.

Physical and Emotional Development: Many middle grade students require both specific primary health care services and strong counseling and guidance programs in order to be able to concentrate their intellectual abilities on academic goals.

The fundamental role of student support services is to address the physical and emotional health needs of students in order to further the development of their minds and to enhance the potential for the realization of their academic goals. Middle grade education draws much of its special character from deliberate attempts to admit and respond to the tension which exists between the academic achievement and the personal developmental needs of young adolescents.

Teachers and other professionals should work together in collaborative ways to ensure that the classroom emerges as the basic setting in the school within which both psychological and physical health are stressed. Strategies include having the same counselor remain with the student throughout the middle grade years, using student study teams to ensure professional collaboration, using attendance outreach programs to make the needs of students known, and allowing students scheduled access to school-related health support services.

Organization & Structure:

School Culture: Every middle grade student should experience a positive school culture which reflects a strong student-centered educational philosophy.

The quality of the school environment is the relative excellence of curricular offerings and instructional practices. It also includes the degree to which students have the opportunity for their personalities and abilities to unfold under the sensitive care of individuals whose commitment evidences the highest levels of professional-client relationships. The best available evidence shows that where teachers and students experience a given constellation of positive and mutually rewarding behaviors, student achievement increases significantly.

A strong student-centered educational philosophy is entirely compatible with high academic expectations. This type of philosophy is a hallmark of excellence in schools which serve the middle grades. It is important to affirm the conviction that education in the middle grades should take place in a setting specifically designed to meet the academic, personal, and social needs and goals of students. A positive

school culture in the middle grades must include explicit attention to the following priorities. Commitment to high academic standards is supported by every member of the staff and is continuously reinforced in daily interactions with students. Commitment to high standards of personal and social behavior is systematically reinforced in daily conduct of school activities. There is a strong belief on the part of teachers that they can and do make a difference in the lives of their students. There is knowledge and sensitivity on the part of all staff members regarding the multiple developmental characteristics of early adolescence. There is demonstrated acceptance by staff members of the significance of rewards and incentives as responses to student excellence. Finally, the essential qualities of administrative leadership is understood by all members of the faculty.

Extra Curricular Activities: Every middle grade student should have access to extracurricular and intramural programs which develop a sense of personal connectedness to school through activities which promote participation, interaction, competition, and service.

Extracurricular and intramural activities should be open to all middle grade students. These activities have the potential to enable all students to earn and enjoy recognition from both peers and teachers. These satisfactions lead directly to the personal and emotional development of young adolescents. Participation in these activities helps many students to achieve a sense of "connectedness." For these students a shaky and tenuous relationship can be transformed through the sense of pride which comes from personal accomplishments in school-related programs.

Student Accountability: Every middle grade student should be accountable for significant standards of academic excellence and personal behavior.

A powerful strategy is found in the modeled behavior by teachers and principals, who define the tenor and quality of academic expectations and personal behavior through their daily interactions with students and one another. Students should be actively involved with the professional staff in defining and shaping standards of academic excellence and personal behavior both in and out of the classroom. This means a continuous and positive interaction which gives students a sense of direct participation in creating the qualitative dimensions of their school environment.

There is an inescapable relationship between standards of academic excellence and personal behavior. High levels of achievement are more likely to be sustained in an orderly and secure school in which behavior problems are minimized while the primary energies of students and teachers are devoted to learning tasks.

✓ Several critical factors deserve special consideration:

- Teacher-student relationships have the essential quality of professional-client interaction as opposed to authoritarian control.
- Emphasis is on rules with a positive cast: rules are intended to reinforce positive qualities as well as to restrict negative behavior.
- Sanctions are explicit with respect to anti-social behavior.
- Teachers, counselors, principals, and staff are close to students as people.
- Academic requirements are balanced against psychological, social, and physical needs.
- Students are helped to feel secure and to avoid living in fear.
- Parents support the standards of their schools by reinforcing appropriate student behaviors and academic commitments in the home.

Transition: Every middle grade student should experience a successful and positive transition among elementary, middle, and secondary levels of school organization.

It is essential to put the emotional and social aspects of transition among different levels of schooling into perspective as a prelude to discussions of academic transition. While the academic mission of schools is the predominant concern of educators, young adolescents will respond to that priority in direct proportion to the ability of the school staff to ameliorate their emotional and social anxieties.

The middle grades must be transitional and organized to allow a gradual and successful movement from early elementary education to high school. Extended blocks of instructional time in selected core curriculums taught by individual teachers or teams of teachers should be a common practice. Specialist teachers should instruct the remaining core curriculum subjects as well as elective and exploratory curricula.

Group guidance programs should be viewed as an invaluable part of the curriculum during each of the middle grade years. One of the most popular configurations is the cross-age advisory concept which brings small groups of students and teachers together across school-age boundaries. Students focus on school-related issues and build strong bonds of friendship, trust, group cohesiveness, school spirit, and shared academic goals.

Structure: Middle grade education should be identified with grades six, seven, and eight. Disparities in state funding formulas among elementary, high school, and unified school districts should be eliminated for these grades.

✓ **Disparities in funding should be eliminated for these reasons:**

- Developmentally, students in these middle grades have more in common in terms of physical, psychological, social, and intellectual variables than do those in other age-grade combinations.
- Fifth grade students have typically not crossed into early adolescence.
- Ninth grade students tend to identify emotionally and physically with high school students.
- The organization of secondary curriculum follows a four year sequence, and this curriculum corresponds to the needs of students to satisfy college entrance requirements.
- A three-year middle grade sequence allows the opportunity for strong and positive relationships to be built among students, teachers, counselors, and administrators.

Scheduling: The school schedule for the middle grades should be a direct reflection of a sound educational philosophy and should facilitate equal access by all students to the full range of instructional programs and student support services.

The basic expression of a school's philosophy is found in its master schedule. It must facilitate every student's ability to realize the full benefits of a school's program. It should enable coherent and rational planning. The loss of a student's ability to exercise a given course option should never be directly attributable to ill-conceived scheduling.

Assessment: Assessment programs for the middle grades should be comprehensive. They should include measurement of a broad range of educational goals related to student achievement and program effectiveness. The primary purposes of middle grade assessment should be to compile data which lead to improved curriculum and instructional programs and more effective student support services.

Valid assessment practices should enable those responsible for middle grade educational policies at state, county, and local district levels to examine their philosophical commitments and administrative actions. Measurement feedback should be provided which allows for a logical and systematic evaluation of these critical variables.

Current assessment programs are inadequate. New measurement practices must be developed which encompass an extended range of educational outcomes. Of particular importance is the need for consensus on a set of core curriculum performance

indicators for the middle grades.

Program assessment must be uncoupled from student assessment. There cannot be a reliance on student achievement (CTBS, CAP, etc.) as the only basis for judging program effectiveness. This diminishes the capacity of the entire school community to take a wider view of the complex and multiple factors which influence individual achievement, school-wide academic performance, and the efficacy of student support services. When these influences are independently evaluated and added to the results of standardized tests, the basis exists for a comprehensive analysis of a school overall performance. Data are then available which allow for rational decisions relative to program planning and the allocation of critical resources.

Teaching & Administration:

Professional Preparation: Middle grade teachers and principals should be prepared to teach and to administer grades six, seven, and eight. Specialized preparation should address the content areas of the core curriculum, instructional strategies which emphasize active learning, and the developmental characteristics of young adolescents.

It is urgent that middle grade students experience exemplary teaching. Exemplary teachers are highly motivated, are skilled in interpersonal relationships, know their subject matter, and have a broad repertoire of effective instructional strategies which deeply involve them with every student, irrespective of individual differences. Students want teachers who give leadership and who enjoy their function as role models, advisors, and mentors.

✓ **Middle grade teachers should receive:**

- Preparation which focuses on the developmental characteristics of early adolescents and the professional skills required to plan and implement successful educational programs for middle grade students.
- Preparation in pedagogical studies specifically related to middle grade curriculum and instructional issues.
- Principal endorsement.
- Undergraduate subject matter experience.
- Training in team and collaborative teaching.

Staff Development: Middle grade teachers and principals should participate in comprehensive, well-planned, and long range staff development programs which emphasize professional collegiality.

Staff development priorities should have their an-

ecedents in the philosophy of the core curriculum, the qualities of teaching excellence, and the characteristics of young adolescents.

Much can be achieved through staff development activities at the levels of individual, group, school, and district program planning. There are three fundamental themes around which the majority of middle grade staff development activity should be organized. The first is academic content. It is the growth in knowledge and skills related to the disciplines which one is assigned to teach, particularly the core curriculum. The next is human skills. It is the growth in knowledge and skills related to human interaction among young adolescents and between members of the professional staff and students. The final theme of staff development activities is pedagogical theory and practice. This is the growth in knowledge and skills related to instructional practices both appropriate to the developmental characteristics of young adolescents and consistent with the core curriculum frameworks.

Leadership & Partnership:

Parents, Communities, and School Boards: Parents, communities, and school boards should share accountability for middle grade educational reform.

The roles of parents, community members, and local boards in middle grade reform efforts must be viewed along a continuum of leadership rather than as separate efforts which intersect in an unplanned and random fashion. Parents represent the single most important citizen group in terms of school support. If parents sustain the importance of a particular innovation or practice, the result is catalytic in terms of generating community and board support. Parents want an balance between the intellectual, emotional, and social priorities in their child's school, and they want to be close to the process. Community support and board support of educational reform efforts are direct correlates of parental support for the reform. Parents shape educational policy through their involvement in school affairs. An educational philosophy that embraces parental concerns about their adolescent children will do much to diminish the present distance between classroom and home, and it will ultimately enable educators to achieve significant professional goals.

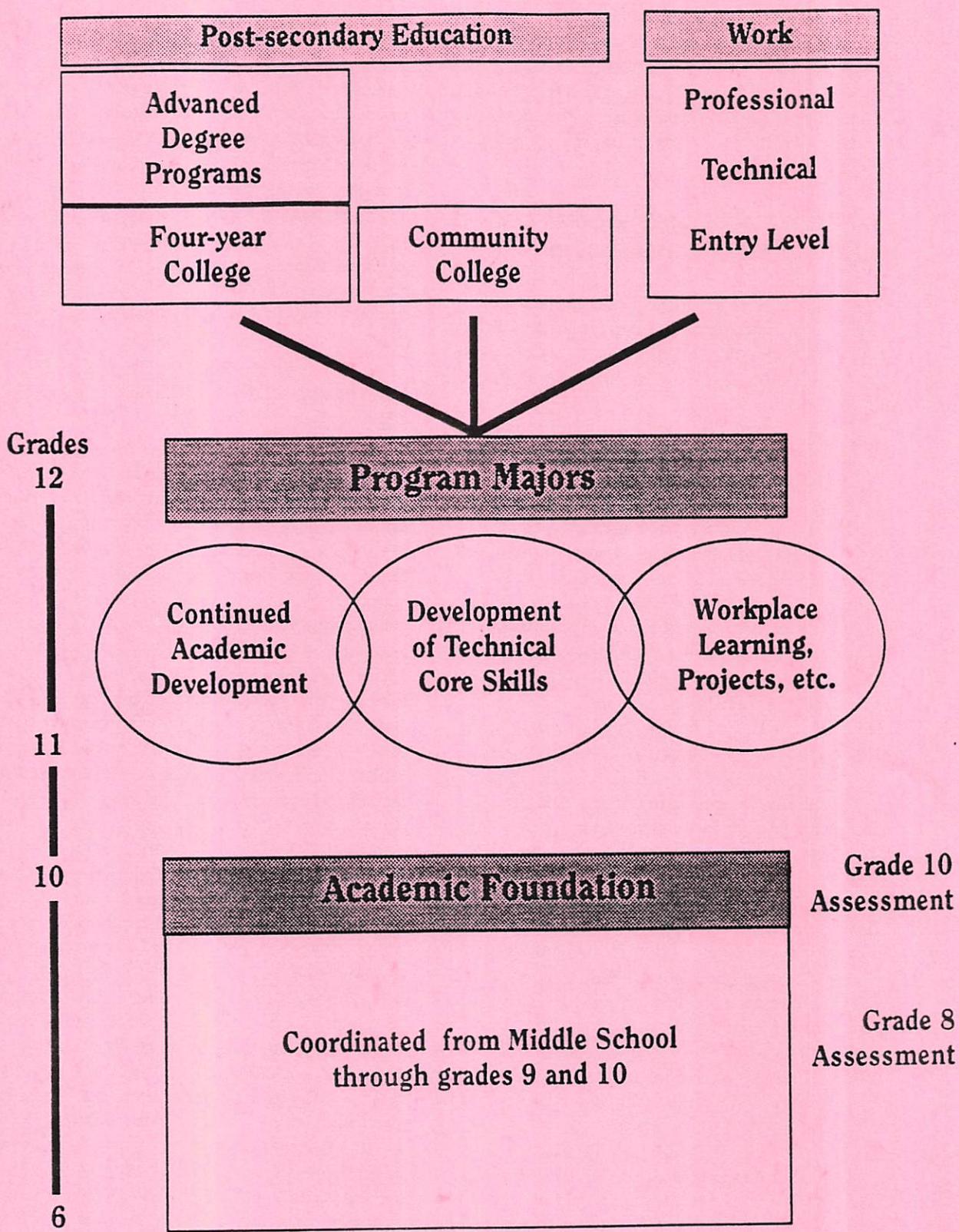
State-of-the-Art Middle Grade Schools: A partnership involving local school districts, institutions of higher education, and the California Department of Education should be created to facilitate the development of 100 state-of-the-art middle grade schools. The mission of these schools should be to serve as a catalyst for middle grade educational reform throughout California.

The concept of 100 state-of-the-art middle grade schools represents an exciting and adventurous response to the findings and recommendations of the Middle Grades Task Force.

✓ These middle schools would subscribe to the following commitments:

- Indicate their willingness to plan and implement new and innovative strategies, programs, practices, and policies.
- Demonstrate their willingness to engage in research-oriented activities related to instructional issues and to systematically evaluate and report findings through varied forums.
- Make a multiple-year commitment in order to allow the critical steps of planning, implementing, and evaluating to occur in relation to program development.
- Demonstrate their willingness to communicate, i.e., to create linkages between people and institutions, that allow a steady flow of formal and informal ideas and concepts.
- Share their desire to be a catalyst for middle grade educational renewal and reform throughout California.
- Agree to become a "clinical" school and to accept responsibility for training teachers, counselors, principals, and others in the areas of curriculum, instruction, organization, counseling, guidance, adolescent development, community involvement, and other areas related to middle grade educational reform.

Paths to Post-secondary Options



Powerful learning requires that technology be used in new ways. One new way is to connect students with databases, which are information sources housed both within and outside the school. Another is to help students move quickly to key themes and ideas. Students can examine and analyze results, deal with multiple variables, and apply important concepts more effectively and in more ways. Finally, technology can also enhance students' verbal and computational abilities, using word processors, mathematics programs, and spreadsheets.

Establishing a Comprehensive Accountability and Assessment System

The high school must have a comprehensive accountability system featuring performance-based student assessment that is relevant to a student's future success, and motivation. What are some functions of such a system?

- It must be based on individual student records. It also must be able to provide summaries for classes, programs, and schools.
- It must have monitoring functions so that both teachers and students have access to the data. This presupposes that a great many records and fields can be stored on each student.
- The system must have the ability to provide space for student assessment according to set standards. This assessment structure should have a time dimension, and it should be able to project and predict student performance.
- Finally, the system should be capable of generating reports. In particular, transcripts should be able to be sent to other high schools, to post-secondary institutions, and to firms. Moreover, a facility for a portfolio collection must be provided to students and parents, as well as the actors above.

An outcome-based program means that the teacher and student work as partners to reach recognized levels of performance and that curriculum and instruction are organized to produce such results. Developing a common understanding to bring this about requires a significant investment of resources and time. This understanding, however, is one of the most powerful tools to improve student performance. When both teachers and students have a vision of what comprises quality work, it is easier to form partnerships and to assist students in producing such work. The results of performance measures, standards, and goals are regularly reviewed by teachers, parents, and business and community leaders. Students realize their performance is closely tied with preparedness for job placement and post-secondary training. Students see a clear relationship between what they are doing in school and their future educational and career goals.

The link between success in and beyond high school is apparent and serves to motivate students.

At the state level, the California Department of Education sets goals, whether achievement or involvement goals, for the schools, and it holds the schools accountable for meeting these goals. The principal document is the High School Performance Report. Schools also set targets for programs and subgroups. Finally, teachers set targets for students. In each case, the assessment is used to evaluate student performance levels and to institute curriculum, program, and school changes, when necessary.

The school and district administrations must provide staff development and resources to support teachers' assessment activities. Assessment meetings must be scheduled regularly to provide a forum for teachers to examine student work, discuss effective practices, and revise curriculum plans as needed.

Providing Comprehensive Support For All Students

Integrated student support is an intrinsic part of what the high school does, not a separate collection of add-on services or programs. The concept of support encompasses the notion that all students can learn and that a diverse student body has diverse needs for support. School becomes a place where multiple options are available, from those that bolster academic and classroom achievement to those that address social, psychological, or health needs. The school is the hub of a coordinated network that includes local, state, and federal agencies, health services, youth and family support organizations, businesses, and the philanthropic sector. Students are connected to the school and to a wide variety of integrated services that can assist them in reaching their goals. Students from non-English-speaking backgrounds receive support that enables them to acquire English fully, attain higher order thinking skills, meet graduation requirements, and enter college, university, or the work force.

Every student feels part of the mainstream; every student feels that he or she can succeed. The high school recognizes that all students may need one form of support or another and that these individualized needs will be met. The first need is that each student feels connected to a group of students and to a faculty team. Students are connected with one adult who becomes their main contact for guidance and support.

Higher expectations for student achievement are accompanied by more individual attention, strong teacher involvement, and learning opportunities before and after school. Academic support is considered a normal part of the help that the high school offers to all students. Some examples are:

- tutoring and counseling,
- training in time management, note taking, writ-

- ing reports, analysis, written expression, and critical thinking,
- adaption to the physical environment, and
- cooperative study groups.

The school is the center of a network of community services that includes local government, health services, youth-serving organizations, private businesses, and philanthropies. The network engages in joint problem solving and resource sharing. Staff is knowledgeable about the social agencies and programs available to students and their families. Specific faculty members are experts in identifying the various resources and connecting students to them.

Academic support is designed to give students an alternative instructional means to access the same curriculum and become members of the high school community. Support, whether provided through redirection of existing resources, community groups, categorical programs, or educational options, is connected to the regular school program and is part of the high school's overall plan. The use of an optional strategy for delivering instruction means that students have the same responsibility to study the core curriculum. There is an equivalent responsibility to students participating in alternative educational settings which assures that all graduates are well prepared to continue with academic or technical studies or have basic employability skills.

Instruction in the academic foundation or the program majors provides language minority students with full access to course content. The student's primary language is used as a powerful learning tool. If significant numbers of students are from the same language group, instruction is in that particular language. If several language groups are represented with fewer students in each group, sheltered techniques along with primary language support provides access to the core curriculum. These strategies ensure that all course content required for grade level promotion, graduation, and participation in higher education or the work force is geared to the needs of new English learners. Students' transition to full English fluency is gradual, varying with the individual and the support provided.

Finally, the entire high school community, including the school district, state, community, and business groups, develop and support ways to provide pupils extra and flexible instructional time, if needed. Strategies include evening classes, Saturday classes, after-school tutoring, and summer school.

Restructuring The School

An organizational structure is designed that facilitates the high school's task of reaching its teaching and learning goals. The high school reconsiders the way people interact: the relationship of the high school to

the outside world, and how resources are used. The school's organizational structure is shaped in different and more flexible configurations to support new student learning outcomes and new faculty expectations. Important elements of restructuring include the following.

- Flexible use of time controlled by an interdisciplinary team of teachers. The schedule is flexible, driven by the competing demands of the curriculum and decided by the teacher team. Students have alternative ways to demonstrate attainment of high performance standards, and those who have quickly met these standards are encouraged to move on.
- Longer blocks of time for student work. The current 50 minute class is typically not long enough for students to solve complex problems, compose effective writing, or design projects that measure real progress.
- Time for emphasizing the academic foundations in grades nine and ten. Time is provided for personalized instruction and support that help students do well in the academic foundation. This emphasis may curtail electives, extracurricular activities, and sports during the day. It may require more participation before or after school.
- A longer school day, week, or year. Scheduling a longer school day, week, or year makes the high school a learning center for the entire community, including working students and parents.
- Reduce the number of students that a teacher sees in a day, so that teachers are allowed more extensive daily student-teacher interaction. A lower student-teacher ratio can be achieved by reorganizing scheduling to allow teachers longer blocks of time, to share a "core" unit with other teachers, or to teach an "integrated" clock like English and social studies.
- Organize clusters in one area or building. The cluster provides the personalized physical setting needed to improve attendance and discipline.

Creating New Professional Roles

The success of high school reform hinges on the ability and willingness of classroom teachers and school administrators to implement necessary reforms. Teachers are given support, time, and staff development so that they can increase their knowledge and expand their skills. Teachers ensure that students not only acquire skills and knowledge, but also independence, creativity, a sense of values, and the ability to exhibit these outcomes outside the school. Establishing an environment of professionalism means encouraging and supporting experimentation, ingenuity, and innovation. It means having a sense of purpose and dedication, not merely focusing on increasing

technical proficiency.

Teachers must have the latitude to define these new roles and responsibilities. They must have the time and support to implement these changes. A cornerstone of establishing an environment of professionalism is to build upon the expertise of teachers while nurturing an atmosphere that encourages risk taking and experimentation. Teachers receive training and staff development, and they have the opportunity to struggle together with their peers, developing an on-site support system. Teachers' inherent isolation in the classroom is overcome as they are encouraged to meet with teachers at other schools and districts to learn about the many resources, strategies, and new ideas that are available.

The concept of staff development is broadened to mean more than training. It is a vehicle for professional growth and renewal. Some activities are:

- participating in collegial support teams, classroom research projects, and curriculum development,
- organizing study groups around issues or professional reading,
- observing other teachers and having time to talk about classroom practices,
- serving on school, district, or state committees, and
- serving as a California Subject Matter Project fellow leading peers in professional development activities.

The district office undergoes a philosophical change in its role and approach. Its primary function is one of assistance and facilitation, not monitoring. The district office strives for a service orientation toward schools and creativeness to make change happen.

School staff has more control over its resources to support new curriculum and student goals. Budget authority and decision making are decentralized so that most budget decisions are made at the school. All stakeholders have the opportunity

to participate in the governance process, which focuses on improving teaching and learning. The school staff is accountable for using resources to improve program effectiveness as evidenced by increased student success.

Improvement, learning, growth, experimentation, and risk taking become organizational norms. Teachers, administrators, classified staff, school board members, and parents play roles in this process.

Charting a Course for Reform

This document is the beginning of a sustained effort to assist and support educators, parents, students, and others who embark on the task of creating the new California high school. A variety of documents, briefing papers, staff development opportunities, and videos will follow.

First, the High School Education Office, a new unit at the California Department of Education, has been created.

Second, ten regional conferences will be held. Their purposes are to focus attention on the report's major themes and to have educators discuss the implications of these ideas for their particular schools.

Third, seminars, forums, conferences, and symposia will be developed to provide an opportunity for school personnel to exchange information and ideas and to learn about new and emerging practices. These activities will come about through regional partnerships among school and district teams, High School Task Force members, county offices of education, SB 1882 Resource Agencies or Consortia, the California School Leadership Academy, the California Subject Matter Projects, and the California Department of Education.

Finally, developmental work will continue on curriculum frameworks, new course sequences, and the integration of vocational and academic curriculum. Briefing papers, documents, and policy papers will be published and made available.

Christine Gee
Traci Teal
Laura Noguer

LESSON PLAN

Title: Beat and Rhythm

Objective: Define beat and rhythm
Experience beat and rhythm through movement
Define personal space
Develop individual creativity through craft

Methodology: Introduction to beat and rhythm
1. define beat
2. define rhythm
Discuss how beat and rhythm relate to everyday life
Application of beat and rhythm to movement and music
1. slow beat
2. regular beat
3. fast beat
Craft - creating tambourines to learn beat and rhythm through actual shaking and/or tapping

Materials: 1. paste
2. paper plates
3. crepe paper or streamers
4. stapler
5. beans (rice may be used)
6. musical tape and player
7. color tags
8. crayons

Closure: Briefly discuss the lesson learned

OBJECTIVE- To understand symbols and how they can represent positive characteristics in ourselves and others.

TIME- 30 minutes

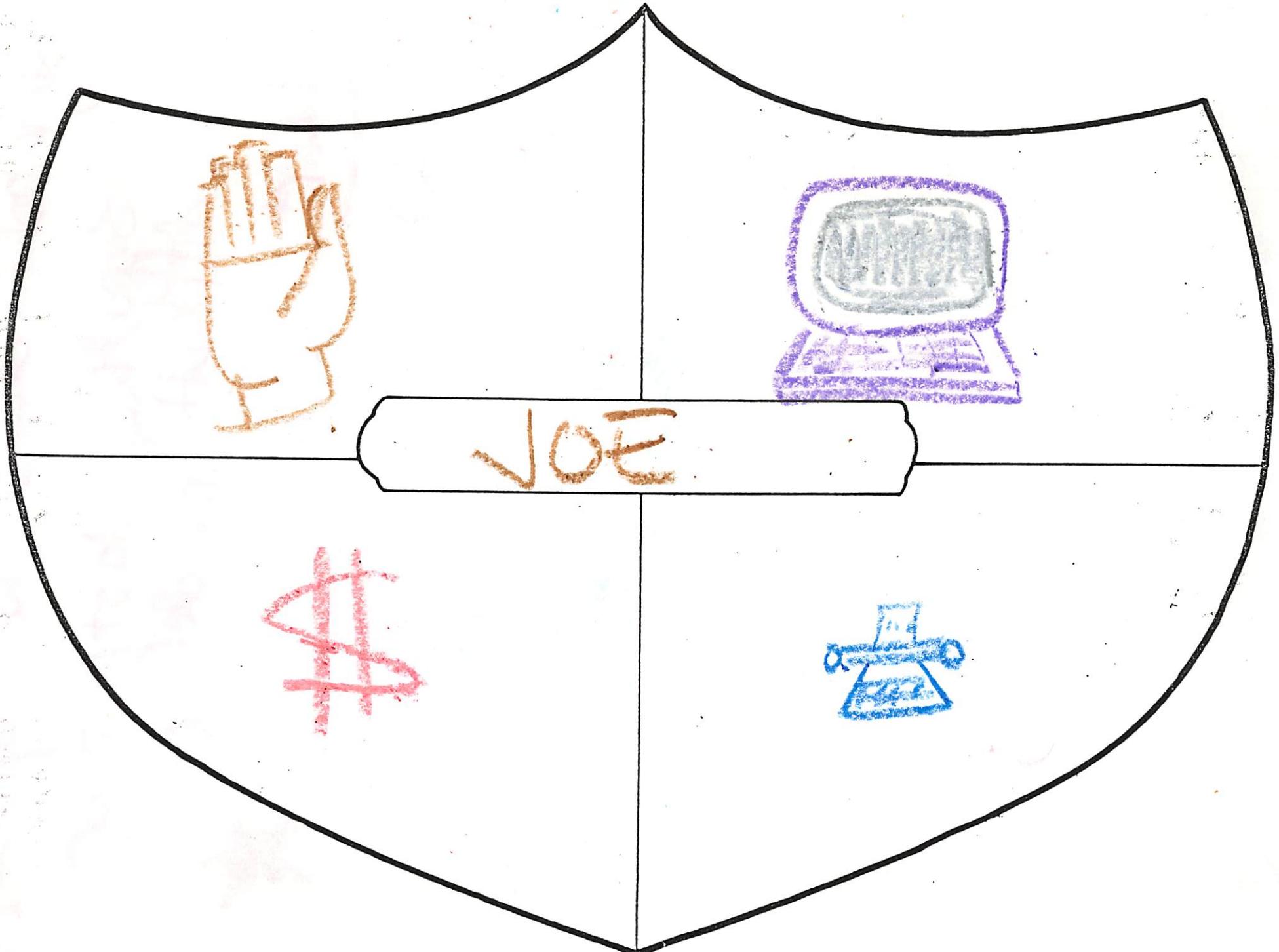
GRADE LEVEL- 6th

INSTRUCTIONAL STRATEGIES- Verbal class participation
Small group interaction (brainstorming)
Visual aids
Integrated art work

MATERIALS- Overhead projector
Transparencies
Crayons
Misc. objects/symbols
Symbol poster
Crest ditto

OUTLINE FOR PRESENTATION

- I. Pass out ditto
Establish norms
Intro. to 6th grade
- II. Intro. to symbols (Alison)
- III. Brainstorming activity (Alison)
Pass around box with objects (Nichole)
- IV. Share brainstorming with class.
- V. Introduce shield as practical application of symbols (Gustavo)
Positive self concept introduction.
- VI. Overhead (Nichole)
Making of individual crest.
- VII. Wrap-up (Each person in the group takes 1 minute to explain their crest to their group) - (Nichole)
- VIII. Closure



Symbol = object that represents
something abstract or
difficult to define



heart

DOB = companionship

- sloppy affection
- man's best friend
- other people

Melanie Schmidlin
Chris Pautler
Janelle Rice
Education 401

-lesson plan-

METAMORPHOSIS: From Egg to Butterfly

OBJECTIVE: Students will gain an understanding of the metamorphosis of a butterfly

TIME: Approximately 30 minutes.

GRADE LEVEL: 2nd grade.

INSTRUCTIONAL

STRATEGIES: Verbal class participation, narrated play, cooperative learning groups, and integrated art work.

MATERIALS: Sentence strips, construction paper, crayons, glue, play props, From Egg to Butterfly by Marlene Reidel, and related books.

PROCEDURE: Introduce metamorphosis to the students, engage in discussion. Perform narrated play, divide class into seven groups to work on art book. Pass out art materials. Students work on project. Compile artwork into book. Conclude lesson.

Stages for Sentence Strips:

cover: -Metamorphosis: From Egg to Butterfly.

stages: -In the summer beautiful butterflies are everywhere.

-Butterflies lay eggs that hatch into caterpillars.

-The caterpillar eats leaves and grows. By fall it is ready to become a pupa.

-A hard shell called a chrysalis forms to protect the pupa. Inside a wonderful change is taking place.

-By spring the chrysalis splits open and a butterfly appears.

-The butterfly has gone through four stages of its life. This process of change is called metamorphosis.

Objective: To learn about the stages insects go through to reach adulthood.

How Do I Look?

Do you know how insects have babies?

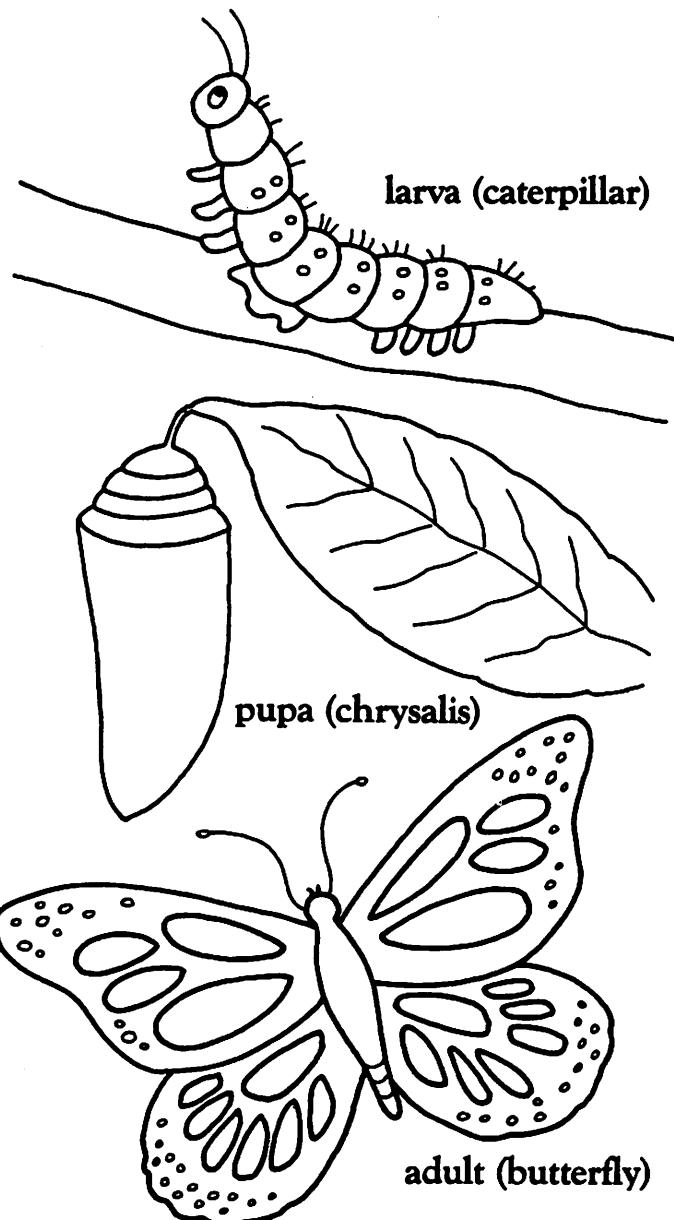
■ Almost all insects hatch from eggs. Many insects do not look like their parents when they hatch. Instead, they look like little white worms. These baby insects are called *larvae*. [Can you say lar-vi?] Larvae don't have wings, and often they don't have legs. So how do they grow up to look like their parents? ■ Well, they do something fantastic! They change shape!

Insects go through something called *metamorphosis*. That's just a big word that means they change shape. People can grow bigger or fatter, but they always stay the same shape. They have two arms, two legs, and one head. But certain insects—flies, wasps, moths, and butterflies—are born looking like worms!

These larvae start to eat lots of food as soon as they are born. They grow quickly. After a while, they stop eating and seem to fall into a deep sleep as their bodies use the food to change from the worm shape into the shape of their parents' bodies. The baby insects are called *pupae* (pu-pi) while they sleep. Can you imagine how it would feel to go to sleep looking one way and wake up looking completely different? ■ Well, that's what happens to the insects while they are pupae!

Not all insects go through this sleeping time. When some baby insects—such as dragonflies and grasshoppers—are born, they do look like their parents, except they don't have wings. These babies are called *nymphs* instead of larvae. Nymphs never go through the sleeping time. They don't have to go to sleep to change shape, because they already look like their parents.

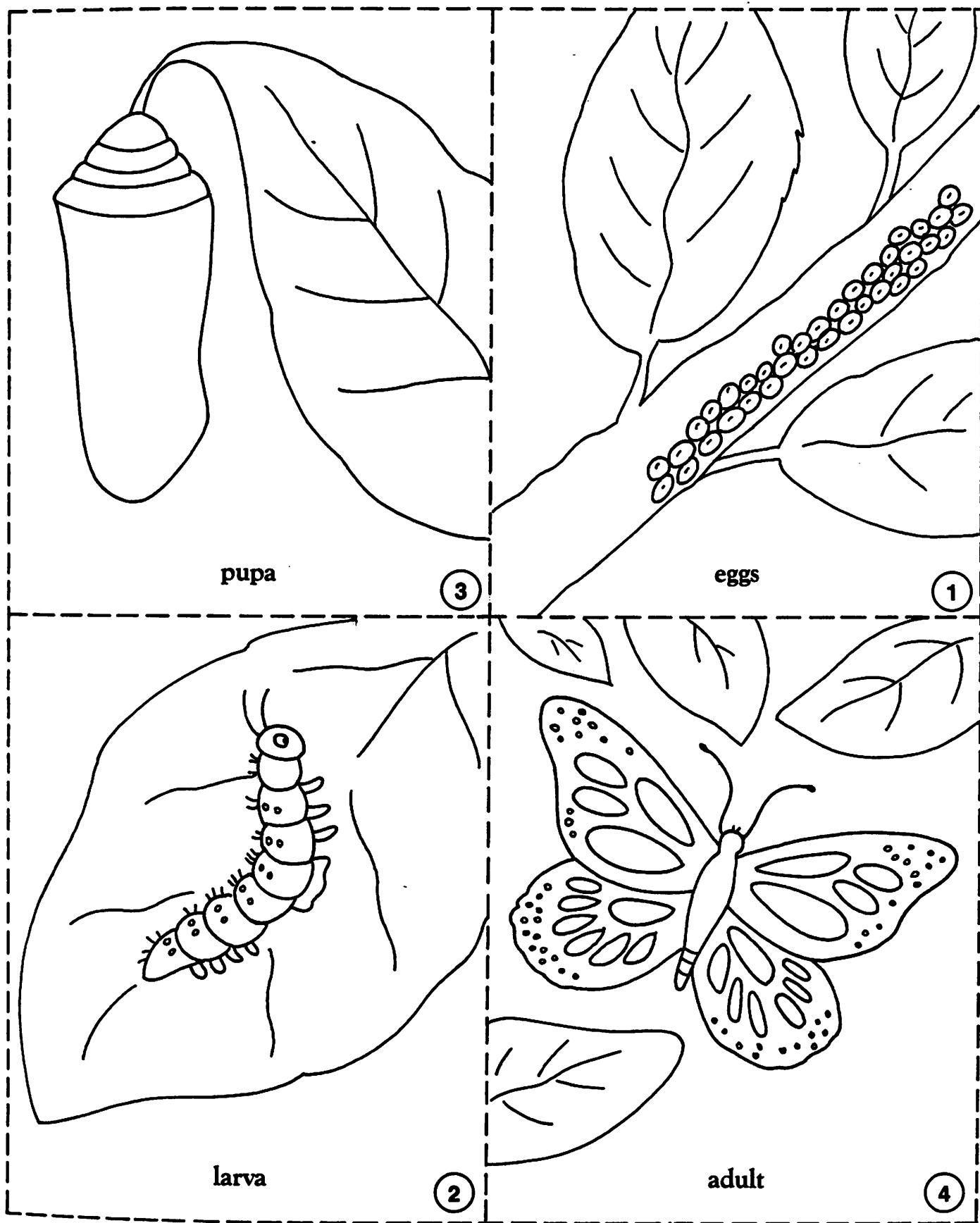
If you could go through metamorphosis, what shape would you like to become?



Name _____

Metamorphosis

Cut along the dotted lines. Paste the boxes in order on a long sheet of paper. [See page 30.]



TOWER BUILDING

GRADE LEVEL: sixth

TIME: 20-30 minutes

MATERIALS: 4 1/4" x 5 1/2" paper

OBJECTIVES

1. To build team cohesiveness.
2. To explore non-verbal communication.

PROCEDURE

1. Place children in groups of four to six students.
2. Pass out 15-20 pieces of paper and 1 roll of tape to each group.
3. Tell the students that they are to non-verbally build a tower or castle using only the given supplies, and that they will have 10 minutes to complete the task.
4. Give the groups a few minutes to view each others towers.

REFLECTION/DISCUSSION

1. What was the hardest thing about working in a group?
2. How did your group communicate with each other?
3. What didn't you like about this project?
4. Did you like being part of a team? Why? Why not?
5. What did you like best about building the tower?

③

nouns

person, place or thing

verbs

Action or doing words

adverbs

HAPPILY
LOUDLY
SLOWLY
SILLY
WILDLY
PASSIONATELY

FUNNILY
SMARTLY
DUMBLY
CRAZILY

adjectives

descriptive words.

How You Do THE
THINGS You LOVE OR HATE

LY

June 23, 1993
Nani, Scott and Chris
Grade 5 English Lesson

INTRODUCTION

The parts of speech
Decide on groups

GROUP ONE

Discuss each group's assignment
Perform the exercise
Decide on a group spokesperson
Discuss and decide on final words

GROUP TWO

Each part of speech is taught and discussed

GROUP ONE (AGAIN)

Group spokesperson presents final words (written on board)

SENTENCES

Creation of sentences using your words!

"T*E O&T#lδ%ρ?"

or

"*The OUTSIDERS*"

A Multicultural Lesson Prepared By:
Parisa Kebriaiy
Jacquelyn Cook
Julie McIntosh

Presented at Chaman University
on June 30, 1993

Time Guideline

	least	most (min.)
Introduction: crazy lecture	1	
quick write	2	
share	1	
The game: divide	1	3
explain	5	
playing time	5	
close	2	3
Form small groups	2	
draw poster	5	
examples (optional)	3	6
Closing statistics	2	
TOTAL	24	35
Address the class as teachers	2	3

OBJECTIVES: Students will experience the frustration of a language barrier, cognitively evaluate the experience, and then derive practical strategies for overcoming language barriers in everyday situations.

TIME: Approximately 30 minutes

OVERVIEW: This is an introductory lesson for a unit on cultural appreciation which could take place in any high school classroom, regardless of the subject matter. This unit will give the students first hand knowledge of the benefits and potential problems associated with a multi-cultural society.

INSTRUCTIONAL STRATEGIES: Visual aids, co-operative learning groups, class discussion, hands-on/interactive learning, multisensory

MATERIALS: Timer, markers, butcher paper, overhead transparencies and projector, yarn or ribbon, beads of two different sizes

PROCEDURE:

I. INTRODUCTION:

Begin class by speaking in a nonsense language made up of sounds that do not make words. Turn on the overhead projector and place on it a transparency that is filled with nonsense words made up of letters and symbols (ie. "j<^(l.) #\\$hr&t),'{j D@!h~:=+"). Act as if you are making perfect sense, and when the students look confused, act as if they should be able to understand you.

After about one minute, say, "*What you have just experienced is a demonstration of what language sounds like to someone who does not understand it. This happens to all kinds of people everyday, in many different situations. Take out your journals. Jot down a few of the feelings and reactions you have just experienced, about how it feels to be expected to understand a language that you do not know.*"

Give students about 2 minutes for the quick-write. Remind students of class rules.

II. ACTIVITY:

Divide the class in half. Send half of the class outside with one of the instructors; this group will now be referred to as the "outside group."

INSIDERS:

- ≥ Give each student 2 beads.
- ≥ Tie a ribbon/yarn around each student's neck. Say, "*This will separate you from the outsiders.*"
- ≥ Have students come up with a non-verbal language to express these phrases:
 1. Hi!
 2. How are you?
 3. I am fine, thank you.
 4. Will you trade your bead with me?
 5. Yes, I will.
- ≥ Have the students practice these phrases a few times with each other.
- ≥ Tell them, "When the outsiders figure out how to trade beads, jump up and down and make a lot of noise. If the outsiders make any mistakes, just walk away with a look of disgust on your face. Do not help them."
- ≥ When the insiders feel comfortable with the new language, have the other teacher bring the outsiders in, while the insiders are in the process of communicating with each other.

OUTSIDERS:

- ≥ Give each student two beads (a different size than what the insiders have).
- ≥ Tell the students that they are going to the moon and that the earth no longer exists. Their survival is dependant on their ability to communicate with the moonians well enough to exchange beads with them. For survival, they need a balanced bead diet!
- ≥ Tell the students that they will have to abide by the new society's guidelines, and if they make mistakes, not to give up but to keep trying.
- ≥ After the inside teacher lets you know that they are ready, tell the students, "You are going to be landing any minute now. Once you trade your bead and become a moonian, you can no longer communicate with your former earthmates. You have five minutes to exchange beads."
- ≤ Take the students inside and start the timer for 5 minutes.

Bring the outside group inside and the game begins!

When anyone from the outside group figures out how to get an insider to trade beads with them, then celebrate this achievement with a lot of noise, put a circle of ribbon (like a bracelet) on their arm, and give them these new instructions: "You are now a member of the *inside group*. *from now on you can continue to exchange beads with members of the inside group (those with ribbons tied around their necks) or with a converted outsider (those with the ribbons on their arms)*. You are not allowed to communicate with those who are still outsiders.

When the timer goes off get the student's attention. Have all of the students applaud for the efforts of both groups. Explain the language to those of the outside group for two reasons. First, explain for the benefit of anyone who did not figure out how to trade beads. Second, explain for those who did figure out how to trade beads but still did not know what the phrases being exchanged meant.

III. REFLECTION--in small groups

Tell the ORIGONAL insiders to get in a strait line, and the ORIGONAL outsiders to get in a line facing them. This is to facilitate grouping the students into small groups of four, but also ensuring that there are two students from each of the inside/outside teams in each group (if there are three or less students left for the last group, have them each join one of the groups of four--forming a few groups of five).

Have the groups spread out and sit on the floor. Give each group a piece of poster paper and markers.

The following questions are intended for the students to read, and direct their thoughts. They do not need to specifically/formally answer them, as long as the subjects raised are addressed on the poster. Instruct the students to read through the questions, and then draw on the poster something that represents what their group has decided is a good solution to language barrier problems. Tell the students that they may use a symbol, phrase, picture, or diagram (ie. spoke, wheel, etc.); whatever best facilitates the ideas that they feel are most important.

After 5 minutes, have students share their posters, one student from each group taping the diagram to the walls, and briefly sharing one of the most important aspects from their poster. Then say, "We will be working more with these posters tomorrow." (Note: if time is short, the sharing can be done the next class session).

SUMMARY AND HOMEWORK:

Put transparencies on the overhead projector (copies included) and say, "This first graph shows the numbers of students in your schools in California who have trouble understanding English. As you can see, the numbers are increasing very rapidly. As of 1992, 16% of all the students were more comfortable in Spanish than in English. The next closest number is 0.9% for Vietnamese. Included on your handout is a chart showing a more detailed breakdown of the different languages, but the total is 21% of the entire student population. This is not just a few students, but 1/5 of everyone in California schools. The second graph shows the same thing, except this is just for Orange County! As you can see from these numbers, the problem of understanding and helping those who are not comfortable with English is not just academic. It is a real situation, something that you experience probably every day.

You know that many of the students you have been in classrooms and schools in have had trouble with English. I do not need to tell you that. But what I do want you to think about is how you have treated these students. Your homework is to think about the game we played, and answer the questions seriously. These numbers I just showed you are only numbers of the school population. Think about your neighborhood, about Orange county, and read all of the questions on the handout regardless of which group you were in. Think about ways in which you can really make a difference. Write at least 3 concrete ways you can make a difference for those around you who have trouble understanding your language, and turn it in tomorrow.

PURPOSE: Explanation to teachers of the processes used in this lesson.

The purpose of the first half of the lesson was not to establish an enjoyable and amiable environment; instead, we wanted to create a classroom situation demonstrating the frustration and hostility a person faces when he/she is unable to communicate.

In anticipation of a "real-life" teaching situation, we identified possible solutions if faced with unco-operative or less-motivated students in our classroom. To encourage participation, we set it up as an activity in which rewards (ie. extra credit points) were given for all students who were involved. We hoped the game-like nature or the activity would intrinsically motivate the students, but the preceding idea was a safe-guard.

In regards to mainstreamed students (or ESL, LEP, Learning Handicapped, etc. classrooms), we believe that these students will function well within the framework of this lesson. The lesson requires very little formal academic skills; students are mainly involved in social interaction, and directed thinking as an introduction to multi-cultural tolerance ideas in the classroom. Within the lesson, students practice co-operative learning groups which would also help to facilitate special needs students.

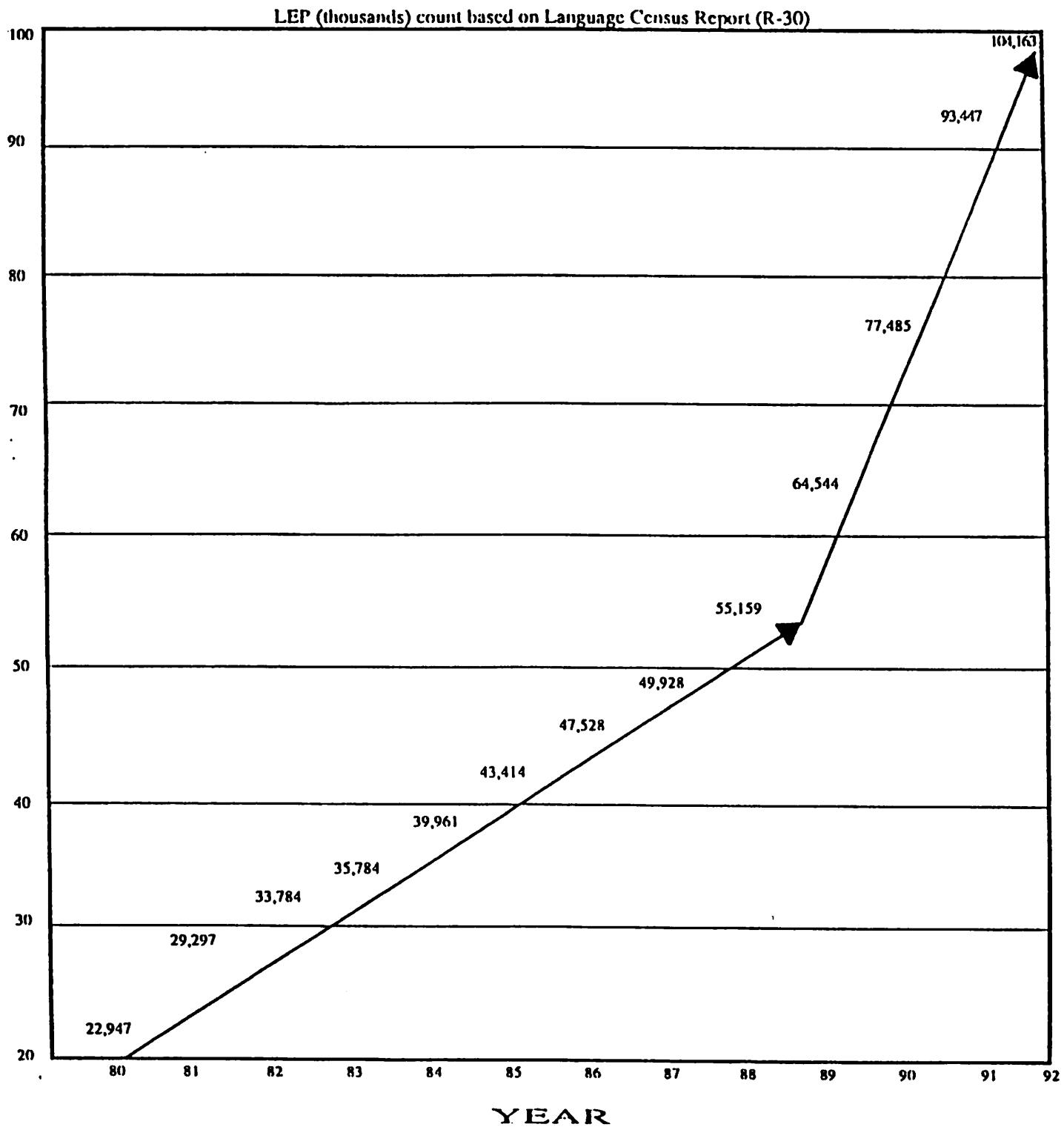
As professionals, we were prepared for what we considered as the worst-possible scenario, which would be our inability to produce a confusing, frustrating atmosphere during the introduction and activity. In this case the "outside" group may have figured out the symbolic language without a struggle. If this were to occur, we will explain to the class what was supposed to happen and discuss why an atmosphere of frustration did not occur. Our guess as to the causes of this possible situation is that it would be caused by the inside group not following the instructions to make the outsiders be accurate, to be disgusted with those who make mistakes, and by those in the outside group who have made the transition helping their former outsider friends. This learning situation can still be salvaged by discussing how what made it easy for the outside group will also make life easier for those who do not speak our language.

WE HOPE YOU FOUND THIS LESSON BOTH INSTRUCTIONAL AND SOMETHING YOU COULD USE IN YOUR FUTURE CLASSROOM.

--JULIE, JACKIE, AND PARISA



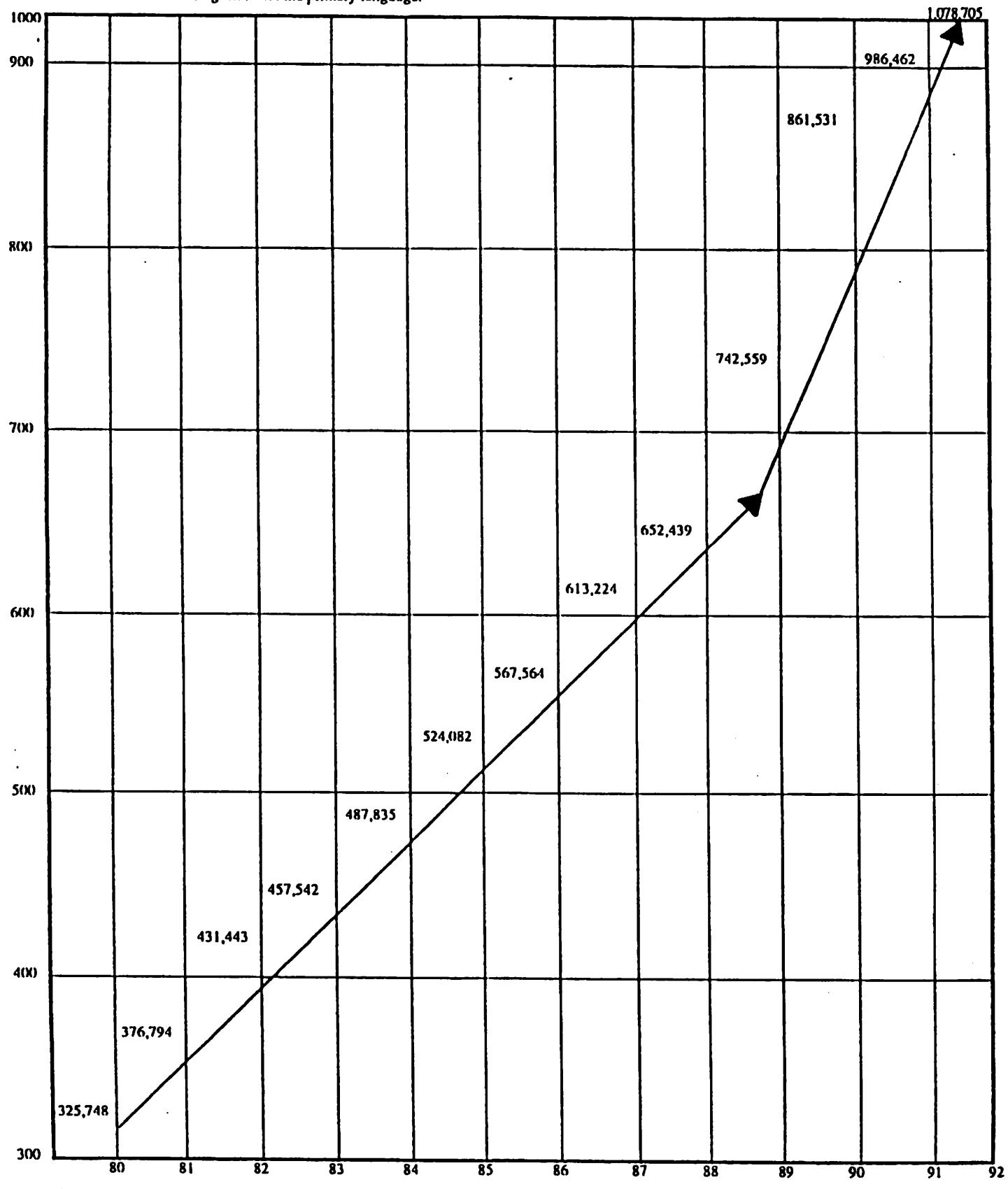
LIMITED-ENGLISH-PROFICIENT STUDENTS IN ORANGE COUNTY SCHOOL DISTRICTS





LIMITED-ENGLISH-PROFICIENT STUDENTS IN CALIFORNIA

- In the past decade, the number of California public school students identified as "limited-english-proficient" (L.E.P.) has tripled to over a million.
- This represents one in every five public school students.
- Additionally, over 1/2-million students are identified LEP (624,515). Thus, nearly 1-3/4 million students come from homes where English is not the primary language.



L.E.P. (thousands) count based on Language Census Report, R-30 (April '92)

6/30

notes, too.

Asst. Superintendent in
charge of curriculum: re:
whole language -
bilingual / ESL

title 7 fed

state

↓
ESL

encourages
praising language
work

sheltered
program
subject in
primary lang.

K-^{4th}

or until transition

POSITIVE TV

Reading ACTIV

language

* black language
dialect

language

the between
dialect &
language
transfer skill

logistics in
the classroom realistic

SimCity

Appli

notes

IBM / Windows

QUESTIONS ???????

* Did this game make you recall a life experience that made you feel alienated ?

OUTSIDERS:

*How did it feel when you could not understand what was going on? How could have one of the insiders made you feel more comfortable? What is a concrete example of how you could apply this to an everyday situation?

*How did you feel when your fellow outsiders refused to communicate with you after they had joined the inside group? or How did it feel to be told not to help those who had not learned the language yet? In what ways could you encourage people to not exclude non-English speaking individuals (at least during activities that you are involved in)?

INSIDERS:

*What could you have done to make it easier for the outsiders to pick up the "language?" How could you apply that to a real-life situation?

*How did you feel toward the outsiders who had trouble learning the language? Although your feelings were real, were they justified? How is that like feelings you have had toward people you have come across who have not spoken English? Now that we have done this activity, do you feel those feelings were justified/fair?

LIMITED-ENGLISH-PROFICIENT STUDENTS, BY LANGUAGE, 1992

<u>Language</u>	<u>Number of LEP</u>	<u>Percent of total enrollment</u>
Spanish	828,036	16.2
Vietnamese	45,155	0.9
Hmong	23,522	0.5
Cantonese	22,262	0.4
Cambodian	20,752	0.4
Pilipino	19,345	0.4
Korean	16,078	0.3
Armenian	13,754	0.3
Lao	12,332	0.2
Mandarin	8,999	0.2
Farsi	6,034	0.1
Japanese	5,734	0.1
All other languages	56,702	1.1
Total	1,078,705	21.1

MY JOURNAL

Feeling about Foreign language class -
"Ugh, here we go again." Uncomfortable,
this is silly. I wonder if we agreed to use all
those "D" sounds or was that random, question
about consistent syntax.

LESSON OUTLINE

JUNE 16, 1993

1. LESSON OBJECTIVE: Value of friendship

2. STEP ONE: Introduction (Mr. Watson)

1. Written definition of friendship.
2. Oral communication of definition within a small group setting.
3. Oral communication of definition within a large group setting.

3. STEP TWO: Play (Mr. LaValle)

1. "The Pilgrim Story", by Kay Gugisberg
2. De-brief
3. Visualization

4. STEP THREE: Craft (Miss Cavadias)

CONCLUSION:

Definition of friendship: talking, sharing, companion-
ship, fun

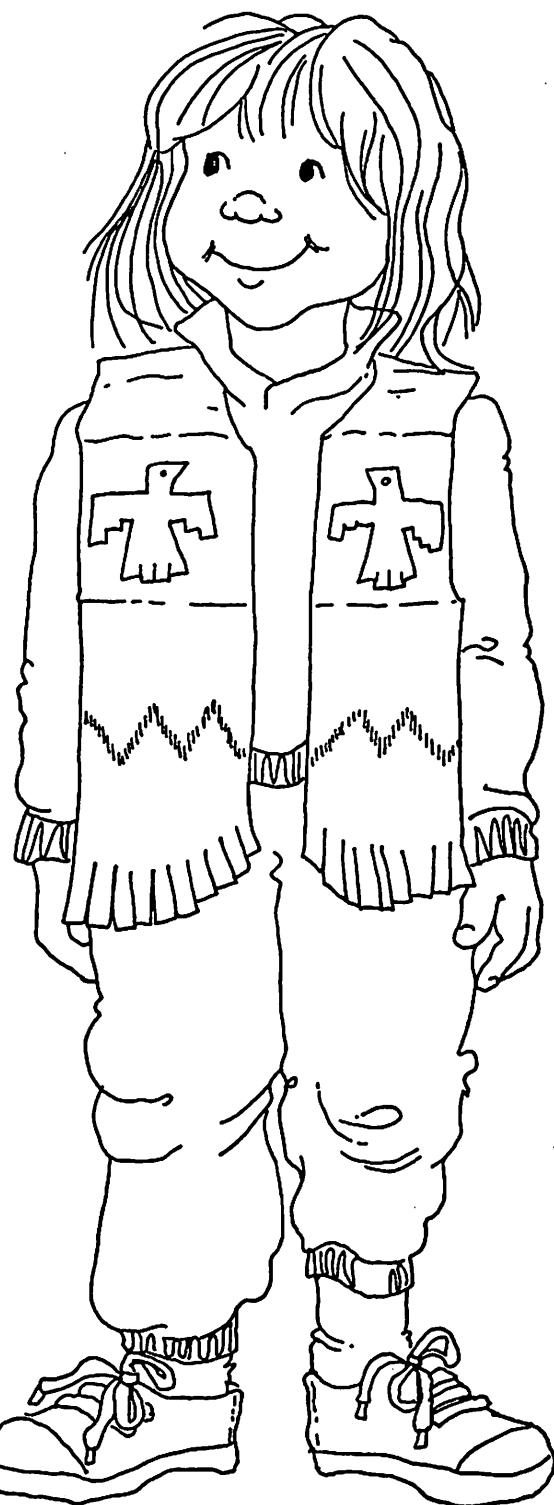
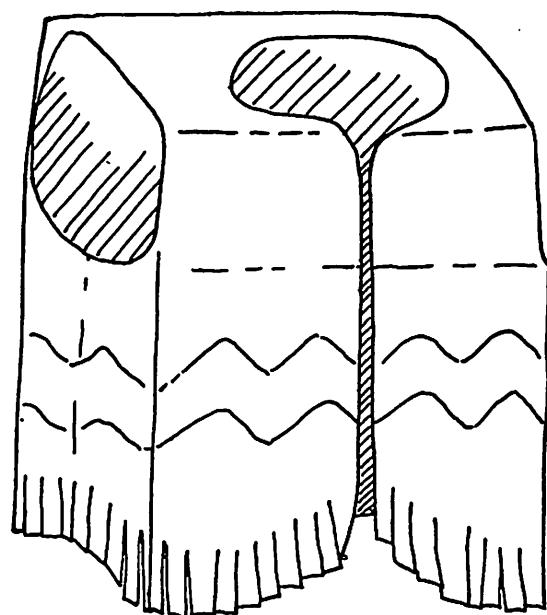
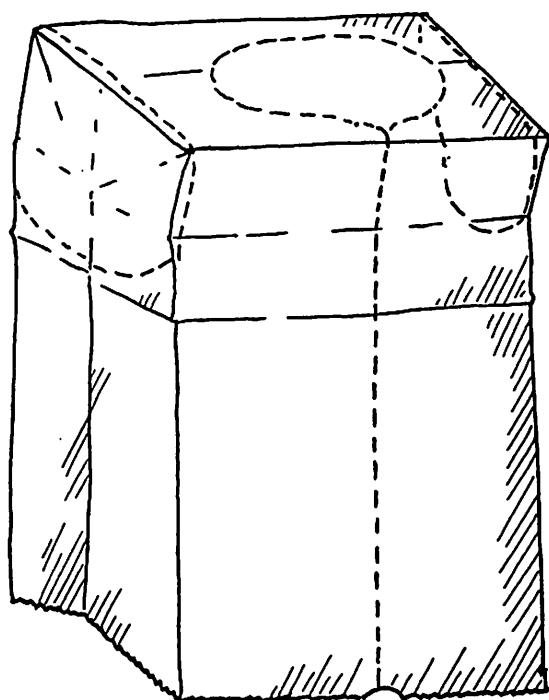


How you address appropriate age group.

- pass a ball/paper during question & answer
- teacher relates on same level
- allow kids to share on personal level
don't rely solely on volunteerism
→ get them to be engaged.
process was good because of
felt good but process by itself
equally important

PAPER BAG INDIAN VEST

Cut a large grocery bag
as indicated by the
dotted lines.

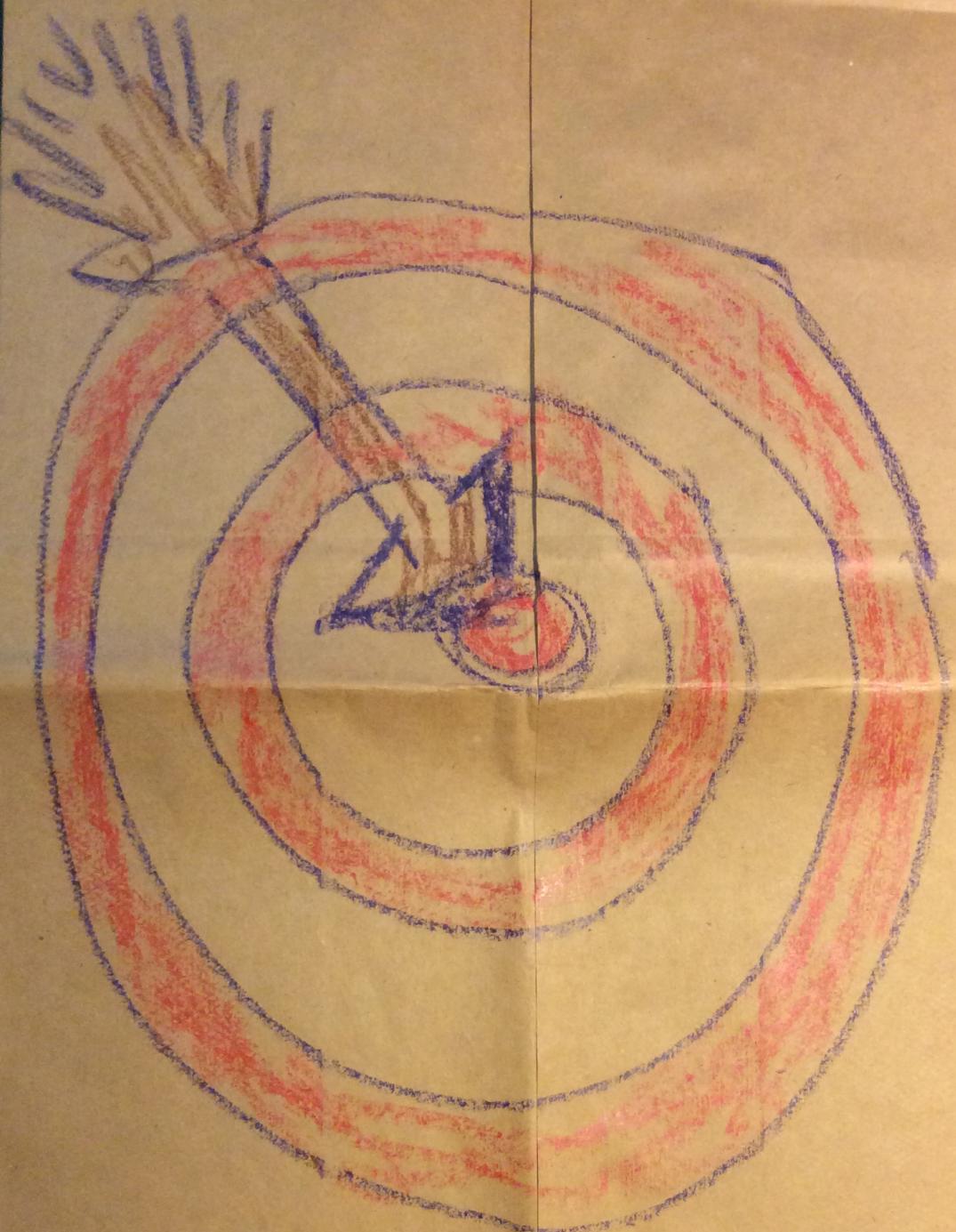


Decorate
and cut a
fringe with scissors.

SCIENTIFIC CERTIFICATION SYSTEMS



Available exclusively
at RadioShack!



The Pilgrim Story

A Readers Theater in Three Acts by Kay Gugisberg

Act I

The Atlantic Ocean, on the *Mayflower*, October 1620

Characters

Five Pilgrim Children

Three Narrators

Child 1: I'm tired of this ship. There's nothing to do and nowhere to go. And whenever there's a storm, I get seasick.

Child 2: I hate the salt. We have to take baths and wash our hair in salt water. My skin and clothes are itchy with salt.

Child 3: What I hate most is the food. We eat dried beef, dried fish, or salt pork. The biscuits are as hard as rocks.

Child 4: Don't forget the awful vegetables—parsnips and turnips.

Child 5: I don't want to go to America. It's scary going to a new place. I'll miss my friends.

Narrator 1: The Pilgrims did have a lot to complain about. The *Mayflower* was a cargo ship. There was barely enough room for the 102 passengers and the 30 crew members.

Narrator 2: During the trip, one of the beams that held the ship together cracked. Everyone had to help hold the beam while the ship's carpenter used a giant iron screw to put it back together.

Narrator 3: And when there was no wind, the boat came to a standstill.

Child 1: Yesterday, a baby boy was born. They named him Oceanus because he was born on the Atlantic Ocean.

Child 2: He's lucky. He'll live in America and never know what it's like to worry about being arrested and going to prison.

Child 3: My father says that in America we can make our own laws.

Child 3: And we can worship God in our own way.

Child 4: Then all the hardships will be worth it because we'll be free.

Child 1: Do you think the Indian children will be friendly?

Act II

Cape Cod Bay, November 21, 1620

Characters

2 Crewmen

4 Narrators

Crewman 1: I can't believe it! After 65 days at sea, we've finally reached America!

Crewman 2: Now the Pilgrims can build their homes and we can sail back to England.

Narrator 1: But the Pilgrims' troubles were not over. The Captain had made an error in navigation. Instead of landing in Virginia, the Pilgrims found themselves in New England.

Narrator 2: It was too cold to sail back to England. The crew planned to stay over until spring.

Narrator 3: Everyone had to stay on the ship until a permanent settlement was built.

Narrator 4: While still on board ship, the Pilgrims wrote the Mayflower Compact, the laws for the colony.

Narrator 1: In England, the king made the laws and the people had to obey them.

Narrator 2: In America, the Pilgrims made their own laws.

Narrator 3: After exploring the coastline, the Pilgrims anchored in Plymouth harbor on December 26.

Narrator 4: They built sturdy houses out of lumber from nearby forests to shut out the harsh winter weather.



Plymouth Colony, Spring and Fall

Characters

Squanto

Samoset

3 Pilgrims

5 Narrators

Pilgrim 1: This past winter was very cold and many people died. Food is running low. And there is still the threat of Indians.

Pilgrim 2: Look! Here come two Indians!

Samoset: Welcome, Englishmen!

Pilgrim 3: Who are you? How do you know our language?

Samoset: My name is Samoset. I learned English from men who came to trade and fish near my village. This is Squanto.

Squanto: I can speak English. I will show you how to plant corn, beans, and pumpkins. I know the best way to fish and hunt. I will teach you.

Narrator 1: The Pilgrims and the Indians became friends.

Narrator 2: When a young Pilgrim got lost in the woods, it was the Indians who found him.

Narrator 3: When the Pilgrims learned that another Indian tribe was planning to attack the Wampanoags, they gave them warning.

Narrator 4: When the Indian chief got sick, the Pilgrims saved his life.

Narrator 5: The summer passed quickly. It is now November.

Pilgrim 1: We have been blessed in America. The Indians are our friends. And the harvest has gone well.

Pilgrim 2: Let's celebrate with a feast: goose, duck, venison, vegetables, and cornbread!

Pilgrim 3: We can have contests and play games, too!

Pilgrim 1: What a great idea! And since the Indians helped to make this possible, we'll invite them!

Narrator 5: And that's just what they did.

Everyone: When the Pilgrims came to America
They wanted to be free.
They had so much to be thankful for
And so do we!

"PRIMARY" and "SECONDARY" COLORS:

Names: Marina Trigonis

Joe Bustillos

Michele Nelson

Date: June 21, 1993

Grade: 3-4

Subject: Science/Art

Objectives The students will be able to recognize the primary and secondary colors as well as be able to mix the primary colors and make secondary colors themselves.

Time Overview

Approximately 30 minutes.

In this lesson, students will learn the primary colors - red, yellow, blue; the secondary colors - green, orange, purple. They will also see what happens when the colors are mixed.

Instructional Strategies

Cooperative learning groups, experiments, mini-lecture, class discussion, hands on, multisensory.

Materials

Three cups of white frosting; three bowls per group; red, yellow and blue food coloring; napkins and disposable bowls; cardboard frames; colored transparencies (red, yellow, blue); staples and stapler.

Procedure

- BRIEF INTRO:

Establish the Norms

Investigating the "Nature of Colors" -

"Building Block Notion": All the colors we see come from 3 "Primary" colors.

Michele

MICHAEL

Question One:

Meaning of the word "Primary" and give examples (eg., "first in order of time, rank, or importance," ex., primary school).

Action: display primary colors. /this

→ Joe holds up card

MARINA

Question Two:

If "primary" is the first level of colors what do you think the name of the next level is?

VKE

Question Three:

What do we have to do to the "Primary" colors to make/get the "Secondary" colors? - combining: 1 primary color plus 1 primary color equals 1 secondary color (this question can be asked with question two and before the class is split - depending on "squirm-factor").

PREDICTING "SECONDARY" COLORS:

DICK

Action: Split class into two main groups (F & C), each main group is split into small groups of 3 or 4 (with class of 25-
 $3 = 22$; 2 groups = 11; small groups = 2 groups with 4 students and 1 with 3 students)

6 per table

VALERIE

Question Four (review):

What does the word "Primary" mean and how many "Primary" colors are there?

Action: ~~FRE - DONE~~

Presentation members hand out pre-mixed primary color Frosting to the "F" group, one color to each student; hand out pre-cut transparencies to "C" group, one color to each student.

MARINA

Question Five (prediction):

How many "Secondary" colors do you think that you can get from the 3 "Primary" colors? What are the names of these "Secondary" colors?

Action:

presentation member writes down the "guesses" on presentation board. /MICHAEL

MAKING "SECONDARY" COLORS:

Instruction (part one):

For the next Five minutes, in your small groups "combine" your "Primary" color to make your "Secondary" colors; write down the names of the "Secondary" colors that you can make on the hand-out sheet.

Action: Aid and assist small groups make their "Secondary" colors - review the idea of "combining"

TEACHING "SECONDARY" COLORS:

Action: Match each small group (C) with one small group (F)

① WINE/F REN / 4 Below

Instruction (part two):

For the next five minutes we want the students with the color transparencies to show the students from other group how they made their "Secondary" colors and the students with the frosting will show the students from other group how they made their "Secondary" colors - afterwards one student from the new group will be asked to demonstrate a "secondary" color in front of the group.

② Joe

Action: Aid and assist small groups make their "Secondary" colors; following allotted time select one student in each "new" group to show the class a "Secondary" color - student's choice or teacher's choice.

CONCLUSION:

Action: After moving students back to their original seats, in a large group a presentation member asks the following question and compares the results with guesses previously written down.

Question Six (results):

How many "Secondary" colors did you find? What are their names?

Instruction: Feel free to eat the colors made by the "Frosting" group.

WINE WHITE DARK ROSES

MUSIC

Follow-up/Extension

Art - Painting - water coloring, Tissue paper collage

Science - The spectrum: colors in light

Literature

"The Magic Crayon" by Tony Palazzo

"What Color Is Your World" by Bob Gill

Music

horizon

red/blue/yellow/green

"Colors" from "Learning Basic Skills Through Music" by Hap Palmer (date unknown)

References

Project Aims. "Color My World." 1984

The World Book Encyclopedia. "Colors." Chicago: World Book-Childcraft International, Inc. vol. 4, 1981.

Software Toolworks Multimedia Encyclopedia (Grolier's Academic American Encyclopedia). "Color" and "Absorption, Light." 1992.

"Detail" Source Materials/Articles

Encyclopedia definitions:

"Color"

Color is a sensation that is aroused when light falls on the retina of the eye. Light may be perceived either as originating directly from a light source or as reflected light. White light is perceived as colorless because the eye is completely attuned to the characteristics of such light, and only a neutral color sensation is aroused by it. COLOR PERCEPTION depends on the different degrees to which various wavelengths of light stimulate the eye.

Spectral Colors

White light can be dispersed by a prism, which resolves a beam of white light into its colored components, the SPECTRUM. Visible LIGHT is ELECTROMAGNETIC RADIATION within a wavelength range of about 410 nm (nanometers) to about 770 nm. The various spectral colors may be characterized by their wavelengths within this range.

An object that reflects only the part of white light between 540 nm and 600 nm will appear yellow. Yellow light may also be generated by combining green and orange-red light (the colors adjacent to yellow in the spectrum) or by combining all colors except blue. Blue is called the complementary color of yellow; the other colors also have complements. Colored light mixed with light of its complementary color appears white. The actual color sensation produced by an object is determined by a combination of the composition of the incident light and the object's reflective properties. An object illuminated by blue light can, of course, reflect only blue light. The color of the object will then be observed only as shades of blue or black. For example, yellow and orange objects reflect almost no blue light and, under these circumstances, will appear black.

Definition and Classification

Color has so many meanings for different observers that a strict definition is difficult, if not impossible. The chemist is conscious of color as a quality concerning a pigment or a dye; the psychologist describes color in terms of visual perception; and the physicist may define color in terms of qualities such as the wavelength of light and its intensity.

A description of color has its foundations in attempts to classify colors. The basic distinction is made between those colors with hue and those without it. The members of the first group--red, orange, yellow, green, blue, and so on--are termed chromatic colors; those of the second group--black, gray, and white--are called achromatic colors.

The next classification divides the chromatic colors into groups by hue, that is, all reds are together, all blues are together, and so on. In doing so a

continuous circle of overlapping hues is formed, ranging from red through orange to yellow, and then through green to blue and violet. Violet overlaps red, thus completing the circle.

Achromatic colors are arranged in a single series from black through the grays to white. Some of the chromatic colors of a single hue are darker or lighter than others, and it is possible to match each degree of lightness to gray of the achromatic colors. This classification is known as brightness, or luminance.

If a particularly vivid hue is mixed with an achromatic color of the same brightness, the resulting stimulus depends on the relative amounts of these two components. This characteristic of color is called saturation. The achromatic colors have zero saturation; the saturation of chromatic colors has a value between zero and one.

All the colors can be classified to form a color tree by placing colors of the same brightness on a disk, with the hues placed consecutively around the disk and with the saturation increasing outwardly from the center. Similar disks of different degrees of brightness are placed in order of their brightness above and below. In this manner a color solid is evolved.

Primary Colors

The human eye is not a selective instrument; it cannot distinguish two superimposed colors as such. Taking advantage of this fact, in 1801 Thomas YOUNG, and later Hermann von HELMHOLTZ, found that it was possible to match any given colored light using a combination of three primary light sources. Occasionally one color was found that could not be matched by direct addition of the three primaries. It was always found, however, that if one of the primaries was added to the given color, the other two primaries could produce a color match with the combination of the sample and the third primary. The amounts of the three primaries required to produce a given spectrum color as a function of wavelength are called tristimulus values. In determining these values, the use of negative values of the primary are occasionally required.

The selection of the three primaries is arbitrary, and the primaries need not be monochromatic sources. It is convenient, of course, to use primaries yielding tristimulus values that are positive throughout the spectral region, but no so such curves can be found experimentally. Artists choose red, blue, and yellow pigments as their three primary colors, but red, blue, and green light is used in color television.

D. J. Lovell

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"Absorption, Light"

When light is incident on a material, some or all of it may be absorbed, reflected, transmitted, or scattered. Each effect is caused by the interaction of the light with the atoms and molecules of the material; the optical effect that predominates depends on the nature of the material and on the wavelength of the incident light.

Light energy that is absorbed is transformed into internal ENERGY within the material. The most common transformation is to thermal energy, or heat, although changes to other forms such as chemical energy (see

PHOTOCHEMISTRY) are possible. Energy that is reradiated at the same wavelength is known as scattered light. **FLUORESCENCE** and **PHOSPHORESCENCE** are phenomena in which the incident radiation is reemitted at longer wavelengths.

All transparent substances absorb light to some extent. Small quantities of water may seem completely transparent, but light that traverses large distances through water is diminished, as is obvious at ocean depths. The degree of light absorbance by a substance depends on the wavelength of the incident light. A colorless substance, such as air or quartz crystals, absorbs light uniformly throughout the range of visible wavelengths. In order for a substance to appear colored, it must interact differently with light of various wavelengths. Grass absorbs red light so that the reflected component is seen as green, the complementary COLOR of red.

The absorption characteristics of gases are more easily seen than those of other stages. Gases generally absorb a series of single wavelengths from the spectrum of visible light rather than the broad bands of liquids and solids. The absorption spectrum of each substance enables the spectroscopist to readily determine the structure of the absorbing material.

The absorption of light as it passes through a medium varies linearly with the distance the light travels and with concentration of the absorbing medium. Where a is the absorbance, the Greek lower-case letter epsilon is a characteristic constant for each material at a given wavelength (known as the extinction coefficient or absorption coefficient), c is concentration, and l is the length of the light path, the absorption of light may be expressed by the simple equation $a = \text{epsilon} \times c \times l$. The relationship is known as Beer's law or Beer-Lambert's law and is used by chemists and physicists to determine the concentration of a component of a solution. The absorption of a given wavelength of light of a solution of unknown concentration is compared with the corresponding absorption of a set of solutions of the same component whose concentrations are precisely known. Using Beer's law, the unknown concentration can be calculated.

Devices that measure light absorption are the colorimeter (usually used only for visible light) and the spectrophotometer (which is able to function at additional wavelengths, including ultraviolet light and infrared radiation). These instruments are common to most laboratories.

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See also: **SPECTROSCOPY**.

Primary Source:

Software Toolworks Multimedia Encyclopedia (Grolier's Academic American Encyclopedia)

COLORS

Name Marina Trigonis
Date May 18, 1993
Grade 1-2
Subject Art/Science/Math

Objectives The students will be able to recognize the primary and secondary colors as well as be able to mix the primary colors and make secondary colors themselves.

Time Approximately 30-45 minutes.

Overview In this lesson, students will learn the primary colors - red, yellow, blue; the secondary colors - green, orange, purple. They will also see what happens when the colors are mixed.

Instructional Strategies Cooperative learning groups, experiments, mini-lecture, class discussion, hands on, multisensory.

Materials 3 cups of white frosting; six bowls per group; red, yellow and blue food coloring; graham crackers; napkins and pop sickle sticks (mixing utensils), 3 1/2 teaspoons.

Procedure For each group of students: 6 bowls, sticks and napkins. Have the 3 primary colors premade at each table.

1. Hand out student worksheet and discuss together.
2. Give 3 - half graham crackers to each student (to be used as a pallet).
3. Each student will measure 1/2 teaspoon of each color of frosting and place on the graham cracker.
4. Talk about primary colors - use to make the widest range of colors.
5. Have children guess what might happen if the primary colors are mixed. Talk about secondary colors (a mix of the primary colors).
6. Ask students what will happen when mixing:

yellow and blue = green
blue and red = purple
red and yellow = orange
orange and blue = brown
red and green = gray

7. Mix colors - experiment and write down results on the worksheet.
8. Talk about prediction v. results.
9. Eat!!

Evaluation Ask questions - what are the primary colors? What are the secondary colors? What other colors can be made?

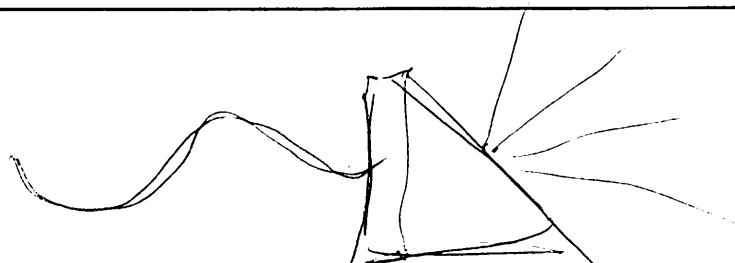
**Follow-up/
Extension** Art - Painting - water coloring, Tissue paper collage
Science - The spectrum: colors in light
Math - Measurements

Literature "The Magic Crayon" by Tony Palazzo
"What Color Is Your World" by Bob Gill

MUSIC "COLORS" LEARNING BASIC SKILLS THROUGH MUSIC By HAP PALMER.

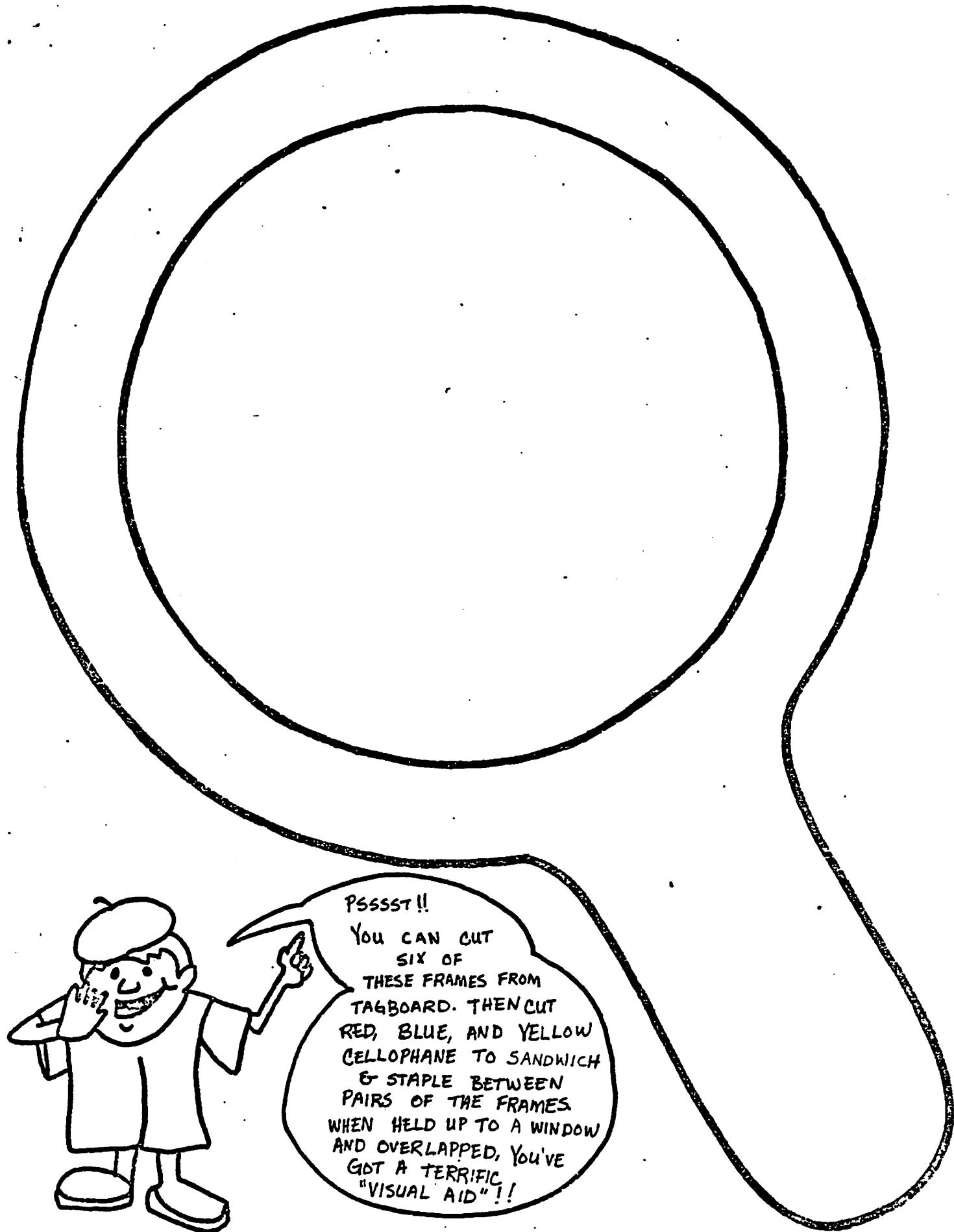
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PPizm

LEAF = GREEN
WATER = BLUE
GLASS = GREEN
FLST



colors

RED

BLUE

YELLOW

colors

